

**REVISION OF THE GENERA AND SPECIES OF
CEUTORHYNCHINI INHABITING
NORTH AMERICA.**

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Since the publication of my paper on the Desmori of North America, the greater part of my spare time has been devoted to a study of our North American Ceutorhynchini. To make these studies as complete as possible I have also examined a large number of foreign, especially European species, representing, with one exception (*Mecysmoderes*), all the genera of this tribe described by Lacordaire.

Before proceeding to the elucidation of the subject proper, I desire to call attention to a few characters which, to the best of my knowledge, have escaped observation heretofore. The formation of the ventral segments presents certain modifications, of which I have made use in the classification of the genera.

1. The second ventral segment fully as long or longer than the two following segments together, the latter always short, the third segment not narrowed on the sides by a prolongation of the hind angles of the preceding segment. Pl. xiii, fig. 19*a*.

2. The second ventral segment scarcely as long or shorter than the two following segments, hind angles prolonged, the prolongation intervening to a greater or less extent between the third segment and the lateral margin of the abdomen and showing thus a tendency to the Tychini. Pl. xii, fig. 1.

Another character, though of a sexual nature only, is this, that in the majority of the species the middle and posterior tibiae (generally) of the males are unguiculate at the apex, while unarmed in the females, and occurs especially in the first three subtribes.

Aside from this last-mentioned character the sexes can, as a rule, be readily distinguished. The males have the beak stouter and less elongate, the antennae less slender and inserted nearer the apex (rarely the same in both sexes), and by the fifth ventral segment being subtruncate and frequently foveate.

Family CURCULIONIDÆ.

Tribe CEUTORHYNCHINI.

Beak variable, very slender, filiform in *Mononychi*, slender in *Ceutorhynchi*, somewhat stouter in *Celiodes*, until in the subtribe *Phytobii* the beak becomes quite robust and short in some of the species. Scrobes lateral or infra-lateral, directed against the eyes, more rarely oblique and directed beneath the eyes (*Phytobii veri*).

Antennæ generally slender, funicle 6- or 7-jointed, club variable, from short ovoidal to elongate, acuminate. Eyes rather large, finely granulated, never closely approximate above, more or less concealed in repose by prothoracic lobes (except *Phytobii veri*). Head subconical, occiput carinate; prothorax generally wider than long, narrowed in front, with lateral tubercles distinct in almost all, postocular lobes more or less developed in all except *Phytobii veri*; scutellum very small or not visible. Elytra broadly oval, convex, in the majority of species, more rarely elongate, generally distinctly wider at the base than the prothorax and separately rounded at the apex. Pygidium nearly perpendicular, exposed, larger in the males than in the females, with a transverse elevated line (except *Mononychus*), a continuation of the lateral margin of the abdomen and against which the apex of the elytra abuts. In front of this elevated line is a short carina. Prosternum canaliculate, the canal sometimes effaced before the anterior coxæ (*Phytobii*), of variable length in front of the latter, with or without antecoxal ridges, more or less deeply emarginate for the reception of the beak in repose; mesosternum canaliculate or excavate in *Mononychi* and *Celiodes*, declivous and entire in *Ceutorhynchi* and *Phytobii* (depressed and transversely sulcate in *Rileyonymus*); side pieces wide, ascending between the prothorax and the humeral angle of the elytra and generally visible from above; metasternum canaliculate in *Mononychus* (and some foreign *Celiodes*), emarginate or excavate anteriorly in some *Celiodes* and forming the posterior limit of the pectoral canal, entire in *Ceutorhynchi* and *Phytobii*. First ventral segment longer than the second and separated from it by a straight suture (see above); sutures 2-4 deeply impressed and curved backward on the sides. Fifth ventral segment longer than either of the two preceding segments (except *Rileyonymus*); anterior coxæ conical, not contiguous, middle coxæ rounded, entirely enclosed by the coxal cavities (open within in *Rileyonymus*) and generally more widely separated than the anterior,

posterior coxæ small. Legs variable, generally slender, never very stout; femora mutic or dentate, more or less clavate (posterior strongly incrassate in *Orchestomerus*); tibiæ very variable, acutely angulate near the base in *Cnemogonus* and *Craponius*, external apical angle of the anterior tibiæ produced into a toothed process in *Cnemogonus* and *Acanthoscelis*, the middle and posterior frequently emarginate above the apex, the emargination generally with a row of stiff bristles; tarsi generally slender, third joint bilobed, rarely narrow (*Rilejonymus*, *Phitobias*). Claws bifid, toothed or simple; a single claw only in *Mononychus*.

I have followed Dr. LeConte in arranging the genera under four well defined primary divisions, to which, however, I prefer to apply the term "subtribe" instead of "group," as was done by that author. Lacordaire included *Mononychus* among his *Celiodes*, but the extraordinary characters presented by that genus fully warrant the plan adopted by Dr. LeConte.

The subtribes are distinguished as follows:

Pygidium without transverse line for the reception of the elytra, pectoral groove extended upon the metasternum, tarsi with a single claw. *Mononychi*. p. 393

Pygidium with transverse line for reception of the elytra and carinate in front, tarsi with two claws.

Pectoral groove extending upon the mesosternum, rarely upon the metasternum. *Celiodes*. p. 390

Pectoral groove not extending upon the mesosternum.

Beak long and slender. *Centorhynchi*. p. 419

Beak stout, generally short. *Phytobii*. p. 455

Subtribe *Mononychi*.

But a single genus constitutes this tribe. Easily recognized by the transverse elevated line of the pygidium, the narrow, sharply defined pectoral groove extending well upon the metasternum and the single tarsal claw. The pygidium is quite protuberant in the male, smaller and excavate in the female; beak long and slender, antennæ with 7-jointed funicle; second ventral segment as long at middle as the two following segments united, the latter with a median glabrous space, third segment not narrowed at the extremities. Legs slender, articulating surfaces of the tibiæ ascending, margined with a row of stiff setæ and permitting of complete extension of the tarsus upon the tibiæ; tarsi moderate, third joint broadly bilobed, fourth rather short, with a single claw.

The genus *Mononychus* Germ. is represented in our fauna by a single species.

M. vulpeculus Fab.—Our largest Ceutorhynchid. Broadly ovate, above densely clothed with black scales; underside of body, sides of prothorax and sutural line, with fulvous scales. Length 4.5–5.0 mm.; 0.18–0.20 inch.

Hab.—Atlantic slope.

The male has the pygidium protuberant, the fifth ventral segment strongly foveate and the middle and posterior tibiae strongly unguiculate at the apex. Female: pygidium excavate, fifth ventral very convex and protuberant towards the apex; tibiae not armed at the apex. As the description of this species by Fabricius antedates that of Boheman, I accord to the former the authority.

Subtribe *Celiodes*.

In all the species of this subtribe the sternal canal extends upon the mesosternum, more rarely the metasternum. The eyes are more or less completely covered in repose by prothoracic lobes; beak somewhat variable, generally long and rather slender, the antennal funicle 7-jointed; sternal side-pieces wide, middle coxal cavities open or closed within, ventral segments variable; the legs are long and slender, femora moderately stout, rarely (*Orchestomerus*) dilated, more or less deeply grooved beneath for the partial reception of the tibiae in repose, except *Acallodes* and *Celiodes*; tarsi slender, third joint bilobed, tarsi with two claws, the latter armed with a tooth of variable length.

The following genera are indicated:

Second ventral segment shorter at the middle than the two following united, prolonged at the sides, third segment narrowed at its extremities, not or narrowly attaining the lateral margin; femora mutic, grooved for the reception of the tibiae. Pl. xii, fig. 1.

Tibiae flattened, acutely angulate or dentate near the base. Pl. xii, fig. 2.

Pectoral canal extending upon the metasternum. **Craponius.**

Pectoral canal not extending upon the metasternum. **Cnemogonus.**

Tibiae not flattened nor dentate near the base.

Outer angle of anterior tibiae produced into a toothed process. Pl. xii, fig. 9.
Acanthoseclis.

Outer angle of anterior tibiae not produced.

Posterior femora normal, or at least not conspicuously dilated.

Surface not conspicuously uneven, without crests of erect scales.

Aulentes.

Surface very uneven, elytra with crests of erect scales. Pl. xii, fig. 16.

Pelenosomus.

Posterior femora dilated. Pl. xii, fig. 17a; Pl. xiii, fig. 18b.

Orchestomerus.

Second ventral segment longer at the middle than the two following united, third segment not narrowed externally, fully attaining the lateral margin; femora dentate, not grooved for the reception of the tibiæ. Pl. xiii, fig. 19*a*.

Metasternum very short, elytra widest behind the middle. . . . **Acallodes.**
Metasternum of moderate length, elytra not widened behind the middle.

Cœliodes.

CRAPONIUS Lec.

Beak somewhat stout, curved and punctured, slightly widened toward the apex, scrobes expanded posteriorly, the upper margin attaining the middle of the eye, antennæ inserted at the middle (♂) or two-fifths from the base (♀), slender, first joint stout, short, second long and slender, and nearly equal in length to the three following joints united, club abrupt, large, first joint occupying more than one-half of its mass. Eyes oval, partially covered in repose; prothorax transverse, strongly narrowed anteriorly, surface uneven, quadri-tuberculate, anterior pair of tubercles larger, obtuse, posterior smaller, acute; base bisinuate, produced in front of scutel, latter very small, glabrous. Elytra suddenly wider than the prothorax and wider than long, humeri protuberant; sternal side-pieces scarcely visible from above; prosternum long in front of the coxæ; pectoral sulcus deep, prolonged to the end of the metasternum. Abdomen short, second ventral segment shorter than the two following together, prolonged at the sides to the fourth segment, the third not attaining the lateral margin; sutures 3 and 4 deeply impressed, fifth segment about as long as the first; pygidium with ill-defined longitudinal furrow; femora not toothed, deeply grooved for the reception of the tibiæ, latter flattened, acutely angulate near the base, sulcate along the external margin for the reception of the tarsi, latter with the third joint very broadly bilobed, fourth rather short, claws armed with a slender tooth about half the length of the former.

Form very robust, subtrapezoidal, coarsely sculptured. The only species known may readily be recognized by the above generic characters.

C. inequalis Say. Pl. xii, fig. 1.—Dark piceous, beak and legs reddish brown, above densely clothed with small, closely adherent chocolate colored scales, intermixed with a fine, white, scale-like pubescence arranged in spots and irregular, transverse lines on the elytra; underside nearly subglabrous, coarsely punctured, each puncture bearing a white filiform scale; prothorax with entire dorsal channel, another less sharply defined, oblique groove extends from the middle of the base each side to between the posterior and anterior tubercles; elytra with

well impressed striae, strongly and approximately punctured, interspaces unequal, alternately wider and more prominent. Length 2.7-3.0 mm.; 0.11-0.12 inch.

♂. Last ventral segment with longitudinal, deeply impressed fovea.

Hab.—Middle, Southern and Western States.

CNEMOGONUS Lec.

This genus was established by Dr. LeConte on a species supposed by him to be identical with the European *Celiodes epilobii* Payk., an insect to which it bears but the most superficial resemblance; a curious circumstance is the fact that the author had the true *C. epilobii* before him, but failing to recognize it, described it as *C. cruralis*. The beak is rather stout, feebly curved and slightly widened toward the apex, the scrobes expanding posteriorly, their upper margin directed against the middle of the eye, antennæ rather stout, funicle 7-jointed, joints 1-2 elongate, 3-4 shorter, equal, 5-7 subtransverse, club large, the first joining forming more than one-half its mass, inserted two-fifths from the apex (♂), or at the middle (♀). Eyes ovate, obtusely acuminate inferiorly, entirely lateral and widely separated above; front flattened, without elevated orbital margin; prothorax wider than long, rounded on the sides and constricted behind the apical margin, basal margin straight each side, produced at the middle; scutel very small. Elytra wider at the base than the prothorax, longer than wide; pectoral canal deep, not extending upon the metasternum; mesosternal side-pieces wide, distinctly visible from above; second ventral segment shorter than the two following combined, third segment narrowed at the sides, attaining the lateral margin more narrowly in the male than in the female; pygidium convex, middle coxal cavities closed within, a trifle more widely separated than the anterior; femora mutic, tibiæ flattened with a large triangular tooth near the base, the external apical angle of the anterior pair produced into a toothed process similar to *Acanthoscelis*, articulating surface of middle and posterior tibiæ ascending with a triangular tooth one-third above the apex, emarginate between this and the subbasal tooth, tarsi with the third joint broadly bilobed, fourth long and slender, claws long and slender, divergent and armed with a short, acute tooth.

One species.

C. Lecontei sp. n. Pl. xii, fig. 2.—Stout, subtrapezoidal, pitchy black, densely clothed above with blackish scales intermixed with a short, whitish pubescence, condensed in a cruciform scutellar spot and less defined, smaller spots on the disc of the elytra. Beak subcarinate, punctured; prothorax densely and

rather finely punctured, except along the basal margin, where the punctures become somewhat larger; dorsal channel distinct in its basal two-fifths, ill-defined beyond, a small and rather obtuse tubercle each side. Elytra less than one-third wider at the base than the prothorax, gradually narrowed from the humeral callus posteriorly, striae wide, not deeply impressed punctures large, somewhat remote, interspaces moderately convex, each with a row of transverse tubercles which, however, become obsolete on the two or three outer interspaces; underside coarsely punctured, each puncture bearing a pale scale. Length 3.3-4.0 mm.; 0.125-0.16 inch.

♂. Last ventral segment with a well defined, coarsely punctured fovea.

♀. Last ventral transversely impressed before the apical margin.

Hab.—Lake Superior, Michigan, Pennsylvania (Hazleton).

It is with pleasure that I dedicate this species to the memory of Dr. John LeConte.

ACANTHOSCELIS gen. nov.

Under this generic term I have separated from its near allies that heterogenous aggregation of forms heretofore known in our lists and collections as *Celiodes ucephalus* and *curtus*. The formation of the ventral segments at once separate it from *Celiodes*, which, indeed, it resembles very little in general habitus. Its nearest relative is *Cnemogonus*, with which it agrees in the pectoral canal not extending beyond the mesosternum and in the presence of the apical process of the anterior tibiae, and from which it differs in habitus and the absence of the acute tooth near the base of the tibiae.

The beak is moderately stout, nearly straight, shorter and cylindrical in the male, somewhat attenuated and shining towards the apex in the female; scrobes expanding posteriorly, antennal funicle 7-jointed. The eyes are rather large; prothorax convex, ample, constricted at the apex in all (except *pusillus*), lateral tubercles acute, small, scutel not visible. Elytra at most very little longer than wide; prosternum moderately long in front of the coxæ, pectoral canal sharply defined and extending upon the mesosternum, metasternum short; second ventral segment shorter than the two following united, prolonged at the sides, the third segment narrowly attaining the lateral margin. The legs are generally rather stout, though slender in some, femora not toothed, posterior stouter than anterior and middle, tibiae very variable, anterior with the external apical angle produced into a toothed process, the middle and posterior with a broadly triangular or even rectangular tooth above the apex, or else subangulate or simple; tarsi variable, claws bifid.

The following analytical table of species is based on a critical ex-

amination of an unusually large number of specimens at my disposal. The species, while bearing a great deal of resemblance to each other, present, nevertheless, considerable uniformity in appearance and size, and with the aid of the figures and descriptions the student will be enabled to identify his material with certainty.

Middle and posterior tibiae stouter, conspicuously widened toward the apex, distinctly toothed or angulated above the latter, tarsi never very slender, orbital margin elevated, front concave. Pl. xii, figs. 5, 5*a*.

Front transversely grooved; scales mottled.

Larger, middle tibiae feebly emarginate above the apex, apical hook of male minute. Pl. xii, fig. 5.....**californicus**.

Smaller, middle tibiae deeply emarginate, inner angle prolonged into a strong mnero. Pl. xii, fig. 6*a*.....**frontalis**.

Front without transverse groove.

Posterior tibial tooth rectangular, scales predominantly grayish white, inconspicuously mottled. Pl. xii, fig. 7.....**griseus**.

Posterior tibiae acutely angulated.

Tibiae stouter, posterior without supra-apical emargination. Pl. xii, fig. 8.
ilex.

Tibiae more slender, posterior emarginate above the apex. Pl. xii, fig. 10.
curtus.

Middle and posterior tibiae slender, at most subangulate, never obviously widened toward the apex. Pl. xii, fig. 9*f*.

Tarsi broad, stout, upper margin of eye not raised above level of front.

acephalus.

Tarsi slender.

Prothorax strongly constricted at the apex.

Outer joints of funicle not markedly wider.

Very stout, scales unicolorous grayish white, without regularly arranged spots of condensed paler scales; tarsi very slender. Pl. xii, fig. 11.
tarsalis.

Less robust, above with regularly arranged spots of condensed scales. Pl. xii, figs. 3 and 4.

Scales pale ochreous, middle tibiae emarginate above the apex, outer apical angle acute, elytral striae wider and more deeply impressed.
guttatus.

Scales grayish, middle tibiae not emarginate, outer angle rounded elytral striae finer.....**perplexus**.

Outer joints of funicle much widened, scales predominantly dark brown, with spots of condensed pale scales.....**meudicus**.

Prothorax not constricted at the apex. Pl. xii, fig. 4.....**pusillus**.

A. californicus n. sp. Pl. xii, figs. 5, 5*a*.—Oval, robust, dark piceous, legs and antennae ferruginous, above densely scaly, scales darkish brown, mottled with pale spots, underside densely clothed with large, dirty white scales. Legs coarsely pubescent; beak rather stout, curved, coarsely punctured and pubescent, a feebly elevated median line, antennae inserted about the middle, first joint of funicle longer than the second, this a little longer than the third, which is equal to the

fourth, joints 5-7 short, scarcely widened toward the club, latter ovoidal. Head concave between the eyes, orbital margin elevated, a curved, acutely elevated ridge between the eyes, forming the anterior margin of a wide transverse sulcus, the posterior margin of which is ill-defined; prothorax nearly twice as wide than long, broadly constricted at the apex, regularly rounded on the sides and narrowed from the base; dorsal channel wide, superficial, evanescent anteriorly, disc densely and very finely punctured except along the base, where the punctures become larger, each puncture bearing a coarse piliform scale, lateral tubercles rather acute, distinct, a spot of pale scales in front of each tubercle, another less distinct spot each side of middle and on a transverse line with the lateral spots. Elytra one-third wider at the base than the prothorax, scarcely longer than wide, narrower from the humeral callus posteriorly, striae deep, punctured, punctures concealed by the scaly vestiture, interspaces convex, alternately wider; femora feebly clavate, tibiae stout, widened from base to apex, posterior with a triangular tooth one-third above the apex, tarsi less stout, fourth joint about as long as the two preceding joints together; pygidium rather coarsely but not densely punctured. Length 3.75 mm.; 0.15 inch.

♂. First and second ventral segments broadly impressed at the middle and posterior tibiae unguiculate at the apex.

Hab.—California, Dr. Horn and Mr. Ulke's collection.

Six specimens, all males, are before me. A specimen bearing the label "*C. curtus* in Dr. Horn's coll." has served as the type for the above description. Readily recognized by the transverse frontal sulcus in which it agrees with the next species, and from which it differs in its larger size and absence of the strong mucro of the middle tibiae. A specimen in Mr. Ulke's coll. has the frontal sulcus almost obsolete.

A. frontalis n. sp. Pl. xii, figs. 6. 6a.—Agrees in form and scaly vestiture with the preceding species, but is smaller. The transverse frontal groove is wide and well marked; the tibiae are more slender, middle and posterior more deeply emarginate above the apex and the inner apical angle of the former prolonged into a stout mucro. Length 2.75 mm.; 0.11 inch.

♂. Same as in *californicus*, except the difference in apical armature of middle tibiae.

Hab.? (probably California)

A male specimen without locality label in Dr. Horn's coll. I am not at all certain that the characters adduced in differentiating this from the preceding species, are constant; more extensive series of specimens are required to settle this point.

A. griseus n. sp. Pl. xii, fig 7.—Robust, oval, black, clothed with ashy gray scales, which are larger and more dense on the underside, smaller and less crowded above, especially on the elytra. Beak rather long and stout, subcarinate, slightly tapering and sparsely scaly from the middle, basal half densely scaly; antennae slender, inserted two-fifths from the apex (♂), first joint of funicle scarcely longer than the second, a little stouter, joints 3-4 equal, a little longer than the outer

joints, which are widened toward the clava, the latter short, ovoidal. Head densely scaly, channeled between the eyes; prothorax one-half wider than long, rounded on the sides, broadly constricted at the apex, lateral tubercles small, acute, dorsal channel extending from base to about the middle, disc densely punctured, a spot of pale scales in front of lateral tubercles. Elytra less than one-third wider at the base than the prothorax and a little longer than wide, striae impressed, punctures not distinct, interspaces flattened, an ill-defined spot of condensed scales near the base and at the end of the third interspace and two-fifths from the base on the fifth and ninth interspaces; tibiae widened from the base to the apex, posterior pair with a large rectangular tooth one-third above the apex, tarsi rather slender, fourth joint as long as the two preceding joints together; pygidium densely punctured. Length 3.5 mm.; 0.14 inch.

♂. Last ventral segment with a broad, feebly impressed fovea; middle and posterior tibiae not unguiculate at tip.

Hab.—Montana.

Three females in Dr. Horn's coll. Distinguished from all others by the large rectangular tooth of the hind tibiae.

A. ilex n. sp. Pl. xii, fig. 8.—Agrees with the preceding species in size and form; upper surface more densely scaly, scales pale brown and grayish white in about equal proportion; underside as in *griseus*; beak densely punctured, subcarinate, pubescent, orbital margin acutely elevated, front broadly concave; prothorax as in *griseus*, narrowly and not very strongly constricted at the apex. Elytral striae less impressed and with the punctures more or less concealed by the scaly vestiture, interspaces flattened, anterior three-fifths with the exception of the sutural interspace more conspicuously mottled, latter and apical two-fifths more uniformly pale gray; posterior tibiae conspicuously widened toward the apex, forming a large triangular tooth, the distal margin of which forms an almost straight line to the apex. Length 3.5 mm.; 0.14 inch.

♂. Last ventral segment feebly impressed; middle and posterior tibiae not unguiculate at the apex.

Hab.—Montana.

A male specimen in my coll. The form of the posterior tibiae readily distinguished in this species. Its nearest ally is *griseus*, from which, aside of tibial structure, it differs by the broadly concave front, acutely elevated orbital margin, the narrow and less sharply defined apical constriction of the prothorax and sexual differences in the male.

A. curtus Gyll. Pl. xii, fig. 10.—Broadly oval, dark piceous, antennae and legs reddish brown, rather densely clothed with very small, brown and pale cinereous or ochreous scales, underside densely clothed with oval, ashy-gray or pale yellowish scales. Beak stout, somewhat flattened above, densely scaly and scarcely tapering toward the apex in the male, cylindrical, strongly tapering and shining beyond the antennal insertion in the female; antennae inserted two-fifths from the apex (♂), or at the middle (♀), stout, first joint of funicle robust, scarcely longer than the second joint, joints 3-7 short, widened outwardly, orbital margin elevated, front moderately concave between the eyes; prothorax convex, less than

one-half wider than long, broadly rounded on the sides, apex widely but less strongly constricted, tubercles acute, dorsal channel entire, narrowed and more superficial anteriorly, disc densely punctured and scaly, scales elongate, piliform, four spots of pale scales in a transverse line immediately in front of the lateral tubercles, another row of three spots behind the apical margin. Elytra two-fifths wider at the base than the prothorax at its base, scarcely wider than long, rather strongly narrowed posteriorly, striae impressed with a row of scales concealing more or less the rather large punctures, interspaces convex, alternately wider and a little more convex, surface mottled in nearly equal proportion with pale and dark scales. Legs rather stout, densely clothed with scale-like pubescence, tibiae widened from the base towards the apex, middle and posterior with a broad triangular tooth, acutely emarginate above the apex, tarsi moderately stout, the fourth joint scarcely longer than the two preceding two joints together, third not very broadly bilobed; pygidium coarsely and not very densely punctured. Length 3.0-3.5 mm.; 0.12-0.14 inch.

♂. Fifth ventral segment feebly impressed, middle and posterior tibiae unguiculate at the apex.

Hab.—District of Columbia, Maryland, Illinois, Kentucky, Arizona, Montana.

Numerous specimens are before me. Differs somewhat in size and appearance according to the preponderating color of the scales. A specimen in my coll. from Montana has the interspaces more flattened and less unequal; punctures more distinct. Gyllenhal's description* applies rather to *acephalus* than to the present species.

A. *acephalus* Say. Pl. xii, figs. 9, 9a and 9b.—Broadly oval, blackish, legs rufopiceous, above clothed with pale, ashy-gray or yellowish scales, unicolorous or mottled in varying proportions with dark brown; scales coarse piliform on the prothorax, smaller and oval, or elongate oval on the elytra, underside densely clothed with large, oval, ashy-gray scales. Beak rather long, stout, cylindrical, and entirely scaly in the male, more slender, conspicuously tapering and shining in its apical half; in the female, antennae inserted at the middle ($\frac{1}{3}$), or two-fifths from the base ($\frac{2}{5}$), first and second joints of funicle elongate, joints three and four equal, not longer than wide, joints 5-7 short, gradually wider, club ovoidal, subacuminate; upper margin of eye not elevated above the level of the front, the latter flattened or longitudinally impressed; prothorax convex, more than one-half wider than long, about twice as wide at the base than at the apex, hind angles rectangular, sides regularly rounded, strongly, but not broadly constricted at the apex, dorsal sulcus distinct, more deeply impressed at the base, nearly obsolete in front, lateral tubercles small, inconspicuous, a fovea-like impression in front of each tubercle; surface densely punctured, punctures moderately large. Elytra about one-fifth wider at the base than the prothorax, scarcely as long as wide and markedly narrowed posteriorly, striae wide, impressed, especially at the base, punctures not very evident, small; interspaces equal, flattened; pygidium convex, coarsely punctured. Legs moderately stout, tibiae gradually widened toward the apex, middle tibiae emarginate above the apex, posterior subangulate, not emarginate; tarsi stout, joints two and three

* Schoenb. Cureul. vol. iv, p. 289.

rather short, fourth not longer than the two preceding joints together. Length 3.0-3.75 mm.; 0.12-0.15 inch.

♂. Ventral segments 2-5 broadly impressed and clothed with long, grayish or fulvous pubescence, middle and posterior tibiae unguiculate at the apex.

Hab.—Eastern, Middle and Western States.

A careful comparison with Say's description, supplemented by those of Germar* and Bohemann,† leaves no doubt in my mind that this is Say's species. It varies considerably in size, Say's statement—"length more than one-tenth inch"—is too indefinite. The size as given by Germar—"magnitudive *Caliodis guttula*" agrees, although the foot-note, "mihl invisa" makes it difficult to discover the source of his information unless based on Say's original description. *C. sabulirostris* Sch. applies to the female; it does not differ otherwise.

This species may readily be distinguished from all the preceding species by the posterior tibiae being simply subangulate and rather slender; from all the following by the much stouter tarsi and on the whole larger size. The impressed abdomen of the male with its long pubescence occurs in other species.

A form occurring in Utah and Colorado differs considerably from the typical.

Var. *tenebrosus*.—Dorsal channel of the prothorax reduced to a well defined and deeply impressed basal fovea, prothorax more strongly convex and very densely and finely punctured, the scaly vestiture is much finer and more sparse, scarcely at all mottled, giving the whole insect a much darker appearance. This may possibly be *C. leprosus* Boh., the descriptive phrase "thorace non canaliculata" being applicable to the variety under consideration, but the impression at the base of the prothorax is superficial. I have not been able to identify this species with any specimen before me. A specimen in the National Museum collection bears the cabinet label, "*C. leprosus*," but the prothorax is distinctly canaliculate, the scaly vestiture a dirty ochreous. Why Bohemann should refer this species to Say as its author is difficult to understand, as I have been unable to discover any species described under that name in Say's writings.

A. tarsalis n. sp. Pl. xii, fig. 11.—Broadly oval, black, antennae and legs rufopiceous, clothed with grayish white scales, larger and very dense on the underside, smaller and less crowded above. Beak rather slender, subbarinate, densely punctured and scaly in its basal half, tapering, more finely punctured

* Schoenb., gen. et spec. Curcul. vol. iv, 1, p. 289.

† Ibid. vol. viii, 1, p. 394.

and shining toward the apex, antennae moderately stout, inserted just before* the middle, first joint of funicle stout, following joints of about equal thickness, 2-4 a little longer than the outer joints, which are not widened, club ovoidal. Head convex, punctured and scaly, orbital margin not elevated, front not concave; prothorax convex, less than one-half wider than long, regularly rounded on the sides, sharply though not broadly constricted at the apex, dorsal channel deeply impressed in its basal fourth, indistinct beyond, lateral tubercles inconspicuous, small, a superficial fovea-like impression with condensed white scales in front of each, surface densely and finely punctured, each puncture bearing an elongate scale. Elytra nearly one-third wider at the base than the prothorax, a little wider than long, feebly rounded on the sides and narrowed from the humeral callus posteriorly, striae impressed, punctured, not concealed by the scales, interspaces somewhat convex, equal, rugose, scales not condensed into spots; pygidium densely punctured; tibiae nearly parallel, middle and posterior tibiae feebly emarginate above the apex, outer angle produced, tarsi very slender, fourth joint conspicuously longer than the two preceding joints. Length 3.5 mm.; 0.11 inch.

♂. Last ventral segment slightly foveate near the tip; middle and posterior tibiae unguiculate at the apex.

Hab.—Texas. A male specimen in Dr. Horn's coll. bearing the cabinet label, "*C. acephalus* Say," from which it differs by the "very slender tarsi and elongate fourth joint and the more convex elytral interstices. It is much more robust than any of the following species, from which it also differs in the absence of all elytral spots.

A. guttatus n. sp. Pl. xii, fig. 3.—Oblong oval, piceous, antennae and legs rufo-testaceous, densely clothed above with small, pale straw-colored scales, variegated on the elytra with spots of paler scales, underside densely clothed with large, cream-colored scales. Beak rather slender, cylindrical and scaly nearly to the tip in the male, attenuated and shining beyond the insertion of the antennae in the female; antennae slender, inserted at the middle (♂), or two-fifths from the base (♀), first and second joints of funicle distinctly elongate, joints 3 and 4 about equal, outer joints a little wider, club stout, ovoidal; prothorax wider than long, rounded on the sides, narrowly constricted at the apex; surface closely but not very finely punctured, dorsal channel well impressed posteriorly, nearly obsolete in front, lateral tubercles very small, a transverse row of four spots and base of dorsal sulcus clothed with pale scales. Elytra less than one-third wider at the base than the prothorax and a little longer than wide, narrowed posteriorly, striae well impressed, wide, not concealed by the scales, distinctly punctured, punctures small, each bearing a white oval scale, interspaces flattened, about equal in width, the pale spots are arranged as follows: one near the base and another at the apex of the third interspace, another spot on the fifth and ninth interspaces, two-fifths from the base; pygidium closely punctured and scaly. Legs densely scaly; tibiae slender, middle emarginate above the apex, outer apical angle acute, posterior tibiae distinctly angulate, tarsi long and slender, third joint not broadly bilobed, fourth longer than the two preceding joints together, tooth very slender. Length 3.25-3.5 mm.; 0.13-0.14 inch.

* To avoid misunderstanding, the expression "inserted before the middle" means "nearer the base," beyond the middle "nearer the apex."

♂. Last ventral segment broadly impressed, middle and posterior tibiae unguiculate at the apex.

Hab.—Texas. Two specimens in Mr. Ulke's collection.

A. perplexus n. sp.—Oblong oval, blackish, antennae and legs rufous, densely clothed above and beneath with rather large, oval, grayish white scales, more ochreous on the anterior part of the prothorax and head. Beak somewhat slender, densely scaly in its basal half, attenuated and glabrous toward the apex (♀), antennae slender, inserted about the middle (♀) of the beak, first joint of funicle stouter, elongate, second a little longer than either of the two following joints, outer joints very little wider, club ovoidal, acuminate. Head convex, densely scaly, orbital margin not elevated, front flattened; prothorax distinctly wider than long, broadly rounded from the base to the apical constriction, which is strong and broad, dorsal sulcus entire, foveiform at the base, less distinct on the disc, lateral tubercles conspicuous, a rather distinct and well impressed fovea in front of each; surface densely punctured, each puncture bearing a broadly oval scale, an ill-defined dark line behind and in front of each tubercle. Elytra about one-fourth wider at the base than the prothorax, longer than wide, narrowed and scarcely rounded on the sides behind the humeral callus; striae not deeply impressed, nearly concealed by the scales, punctures fine, not distinct, interspaces flattened and equal on the disc, a little convex and subequal toward the apex, humeral spot, a small inconspicuous spot at base of first interspace, one near the base and another near the apex of the third, an elongate spot on the fifth about two-fifths from the base, another on the seventh and on the ninth interspaces and arranged in an oblique line of condensed whitish scales; pygidium convex, densely punctured and scaly. Legs slender, middle tibiae very slightly emarginate above the apex, outer angle not acute, posterior tibiae simple, tarsi slender, piceous, third joint not broadly bilobed, fourth a little longer than the two preceding joints together. Length 3.25 mm.; 0.13 inch.

Hab.—Nebraska, California.

Two female specimens in Mr. Ulke's coll. Clearly resembles *guttatus*, and from which it differs merely in the scales being grayish white, finer elytral striae and the feebly emarginate middle tibiae; there is also a distinct spot about the middle of the seventh interspace; one specimen has the legs testaceous.

A. mendicus n. sp.—Oblong oval, dark piceous, legs rufo-piceous, above densely clothed with small, dark brown scales mottled with spots of pale scales; scales on the underside large, dirty white. Beak scaly and punctured from the base to the insertion of the antennae, tapering and more finely punctured toward the apex, more so in the female; antennae inserted just before the middle (♂), or scarcely more than one-third from the base (♀); first joint of funicle stout, second slender, elongate, outer joints gradually shorter and wider, seventh joint nearly twice the thickness of the second, club ovoidal. Eyes large, upper margin raised a trifle above the level of front, latter broadly concave, a spot above each eye and median line of pale scales; prothorax as long as wide at the base, well rounded on the sides, widest a little behind the middle, apex broadly and deeply constricted, posterior tubercles minute, nearly obsolete, dorsal channel well im-

pressed at the base, narrower and very superficial in its anterior two-thirds, disc densely punctured, punctures rather fine, a transverse row of four pale spots immediately behind the middle, some pale scales along the median line and on the sides in front. Elytra a little more than one-fourth wider at the base than the prothorax, about as long as wide, humeri oblique, feebly rounded and gradually narrowed on the sides from the humeral callus posteriorly; striae wide, deeply impressed, closely and distinctly punctured, interspaces convex, not obviously unequal; spots of pale scales arranged as in *perplexus*; pygidium convex, densely and finely punctured; femora annulate with white scales near the apex, the posterior pair rather strongly incrassate, tibiae quite slender, middle emarginate above the apex, posterior subangulate, tarsi slender, more dusky at the apex, second joint shorter than either the first or third, the latter more broadly bilobed, fourth a little longer than the two preceding joints together. Length 2.75-3.0 mm.; 0.11-0.12 inch.

♂. Last ventral segment with a rounded, well defined apical fovea, middle and posterior tibiae feebly unguiculate at the apex.

Hab.—Georgia, Columbus Texas, Florida.

Mr. Ulke's Nat. Mus. and my own collections. Four specimens are before me. Recognizable by the predominant dark brown color of its scales, rather small size and the distinctly widened outer joints of the antennal funicle.

A. pusillus n. sp. Pl. xii, fig. 4.—Moderately robust, oval, pitchy black, legs bright rufous, above densely scaly, scales dark brown intermixed with pale; underside, scales ashy-gray, not crowded. Beak rather slender (♀), scaly toward the base, tapering and shining toward the apex, antennae moderately stout, first and second joints of funicle slightly elongate, following joints shorter, gradually wider, club short, oval; orbital ridge elevated, front concave between the eyes, occipital carina not obvious; prothorax fully as long as wide, narrowed from the base to the apex, latter not obviously constricted, sides broadly rounded, transversely impressed behind the apical margin, lateral tubercles small but distinct, dorsal channel deeply impressed, foveiform in its basal third, obsolete in front, disc densely punctured, a spot of pale scales in front of each tubercle and each side of median line and from which extends an ill-defined dark line toward the base. Elytra about one-fourth wider at the base than the prothorax, scarcely as long as wide, rounded on the sides towards the apex, striae rather fine not deeply impressed, distinctly punctured, punctures not closely approximate, interspaces a little convex, a white spot of condensed scales near the base and another near the apex of the third interspace, sutural interspace darker; anterior and middle femora rather slender, posterior decidedly stouter, tibiae slender, middle very feebly, posterior more strongly subangulate, tarsi slender, third joint more broadly bilobed, fourth as long as the two preceding joints. Length 2.5 mm.; 0.10 inch.

Hab.—Texas.

A female specimen in Mr. Ulke's coll. Resembles the preceding species, but the prothorax is not constricted at the apex, the elytra more finely striate and without distinct spots on the fifth and ninth interspaces and the darker color of the sutural interspace. The occipital carina is not evident.

AULEUTES gen. nov.

This genus is distinguished from *Celiodes* by the formation of the ventral segments. The beak is rather stout, feebly curved and cylindrical. Eyes moderately convex, rarely (*epilobii*) more prominent, with elevated orbital margin, partly or entirely concealed in repose according to the development of the prothoracic lobes; prothorax evenly convex, lateral tubercles distinct; scutell distinct in some, not visible in others. Elytra somewhat suddenly wider at the base than the prothorax, striato-punctate; pectoral canal deeply excavate, sharply limited laterally, extending upon the metasternum, more rarely to the mesosternum only; middle coxæ more widely separated than the anterior and never very closely approximate to the latter; second ventral segment shorter than the two following united, the third narrowed at the sides, not or narrowly attaining the lateral margin. Legs generally slender, middle and posterior tibiæ emarginate above the apex; tarsi variable.

The species are dark colored insects, thinly clothed with a fine squamiform pubescence. I have divided them according to the formation of the metasternum into two groups, as follows:

- Metasternum distinctly excavate and emarginate, forming the posterior limit of the pectoral sulcus. Elytra evidently roughened (except *epilobii*). Pl. xii, fig. 14 Group I.
 Metasternum not, or very feebly emarginate, not entering into the formations of the pectoral canal. Elytra not asperate. Pl. xii, fig. 14a. Group II.

Group I.

Contains the larger number of species, which, while exhibiting considerable differences in structure, agree in having the metasternum emarginate and more or less excavate. The elytra are roughened in nearly all by tubercles, or small, acute granules.

The species are distinguished as follows:

- Anterior and middle tibiæ not subangulate near the base, eyes not prominent, front not concave.
 Larger species, claws armed with a long, slender tooth, almost bifid, prothoracic lobes feeble, eyes only partially concealed in repose.
 Funicle 7-jointed.
 Alternate elytral interstices wider and more conspicuously tuberculate.
 Larger, prothorax less coarsely punctured, anterior tibiæ curved, slender, elytral tubercles small. Pl. xii, fig. 15. **curvipes.**
 Smaller, prothorax coarsely punctured, anterior tibiæ straight, elytral tubercles large, distinct. Pl. xii, 15a. **asper.**
 Interspaces equal, or nearly so; prothorax coarsely punctured.

Stouter, prothorax distinctly wider than long, elytral asperities more obvious **tenuipes.**

Less robust, prothorax very little wider than long. **ater.**

Funicle 6-jointed. **tuberculatus.**

Smaller species, claws arranged with a short tooth, postocular lobes prominent, eyes concealed in repose.

Black, cruciform scutellar spot and lateral fascia white. Pl. xii, fig. 12.

subfasciatus.

Dark brown, sutural spot and scattered, erect scales, white. Pl. xii, fig. 13.

tachygonoides.

Anterior and middle tibiæ subangulate near the base. Pl. xii, figs. 15*b* and 15*c*.

Larger, head convex, without elevated orbital margin, elytral interspaces roughened with small tubercles **longirostris.**

Smaller, front concave between the eyes, latter with elevated ridges, elytra without evident asperities, a cruciform scutellar spot of white scales.

epilobii.

A. curvipes n. sp. Pl. xii, fig. 15.—Broadly oval, black, antennæ and legs dark rufous; above thinly clothed with whitish pubescence, a large scutellar spot and some scattered ill-defined spots of condensed, larger scales, underside clothed with larger scales. Beak stout, rather short, slightly curved, finely subcarinate in almost its entire length, striate each side towards the base, the latter squamous, coarsely punctured, glabrous at the apex, scrobes suboblique, antennæ slender, inserted at the middle, scape directed against the lower angle of the eye, funicle 7-jointed, joints 1-4 elongate, outer joints short, club oval. Eyes not prominent, only partially concealed in repose. Head coarsely punctured, front slightly concave between the eyes, the latter without elevated ridges; prothorax one-half wider than long, less than one-third wider at the base than at the apex, narrowed from the basal third to the apical constriction, the latter broad, conspicuous, lateral tubercles large, prominent, dorsal sulcus almost entire, but distinct at the base only, surface evenly, densely and rather coarsely punctured, each puncture bearing a fine short hair, a few pale condensed scales in front of the scutel, which is very small. Elytra one-fourth wider at the base than the prothorax, regularly rounded on the sides and narrowed to the apex, striae impressed, closely punctured, interspaces somewhat convex, alternately a little wider, each with a row of very small, but acute granules, more evident on the wider interspaces and on the declivity, each bearing a short procumbent seta; pygidium not coarsely punctured with a longitudinal, feebly impressed sulcus; underside very coarsely punctured, anterior tibiæ long and curved, middle and posterior tibiæ with a triangular tooth and emargination above the apex, tarsi very slender, first joint much longer than the second, third broadly bilobed, fourth shorter than the two preceding joints together, claws with a long, slender tooth. Length 3.0 mm. : 0.12 inch.

♂. Abdomen flattened along the middle, fifth segment with broad semicircular fovea, middle and posterior tibiæ unguiculate at the tip.

Hab.—Texas.

A male specimen in Dr. Horn's coll.; it bears the cabinet label, "*C. tenuipes* Lec.," from which it differs by its much smaller elytral tubercles, greater size, curved anterior tibiæ and much more slender tarsi; the anterior tibiæ have a very small apical hook.

A. asper Lec. Pl. xii, fig. 15a.—Broadly oval, robust, black with some lustre, antennæ and legs scarcely paler, thinly pubescent above, conspicuously mottled on the elytra with whitish scales. Beak stout, rather short, cylindrical, slightly curved, carinate, striate each side, punctured and pubescent, glabrous at the apex, scrobes suboblique; antennæ not very slender, inserted about the middle, funicle 7-jointed, joints 1-2 stouter and longer, following joints shorter, club ovoidal, acuminate. Head densely and rather coarsely punctured, somewhat concave between the eyes, these only partially covered in repose and without elevated orbital ridges; prothorax a trifle wider than long and about two-fifths wider at the base than at the apex, feebly rounded on the sides, broadly but not distinctly constricted at the apex, postocular lobes nearly obsolete, lateral tubercles acute, distinct, dorsal channel narrow, ill-defined, except at the base, surface densely but not coarsely punctured and thinly pubescent, a median line and four ill-defined spots arranged in a transverse line, of whitish scales; scutellum minute, scarcely visible. Elytra nearly one-third wider at the base than the prothorax, about as long as wide, rounded on the sides from the humeral callus to the apex, deeply striate, striæ closely and rather coarsely punctured, interspaces convex, alternately wider, each with a row of large, acute and somewhat remote tubercles, those of the broader interspaces larger and more numerous, partially obsolete on the narrower interspaces, each bearing a bristle-like hair on its summit, a transverse scutellar spot, sutural interspace and less defined spots and lines of white scales; pygidium densely but not coarsely punctured with a longitudinal, ridge-like elevation; underside rather coarsely punctured; tibiæ nearly straight, subparallel, outer angle of anterior pair acutely produced, middle and posterior feebly emarginate above the apex, tarsi moderately slender, third joint less broadly bilobed, fourth as long as the two preceding joints together, claws armed with a long slender tooth, nearly as long as the claw itself. Length 2.0-2.5 mm.; 0.08-0.10 inch.

♂. Last ventral segment with a small ill-defined fovea, middle and posterior tibiæ unguiculate at the apex.

Hab.—Canada, Iowa, Kansas, Colorado, Montana, Missouri.

Numerous specimens are before me. The obviously tuberculate and mottled elytra make this species readily recognizable. The only species to which the present bears a close resemblance in the tuberculate elytra, is *tuberculatus*, from which it differs in the 7-jointed funicle. The produced outer angle of the anterior tibiæ bears no resemblance to the process of *Acanthoscelis*. A specimen in the Nat. Museum coll. bears the label "an *Epilobium*."

A. tenuipes Lec. Pl. xii, fig. 14.—Oval, entirely pitchy black above, very thinly clothed with fine, pale pubescence, interspersed with white scales, underside more densely scaly. Beak rather long and stout, slightly curved, cylindrical and punctured throughout in the male, slightly tapering and shining toward the apex in the female, a distinct median elevated line and more obscure lateral one each side; scrobes parallel, antennæ not slender, inserted a trifle before (♀), or beyond (♂) the middle, funicle 7-jointed, joints 1-2 elongate, stout, outer joints shorter; eyes scarcely convex, without elevated ridges, only partially concealed in repose. Head densely punctured, front flattened; prothorax scarcely wider

than long, one-third wider at the base than at the apex, sides broadly rounded, apical constriction wide and distinct, apical margin feebly emarginate at the middle, indistinctly bienspid; lateral tubercles quite distinct, acute, dorsal channel irregular, well impressed in its basal third, obsolete anteriorly, a transverse impression in front of each lateral tubercle, surface very coarsely punctured, especially towards the base, punctures more crowded on the sides in front and on the apical constriction; scutellum punctiform. Elytra nearly one-fourth wider at the base than the prothorax, not longer than wide, feebly rounded on the sides and conspicuously narrowed towards the apex, striae very wide, coarsely and closely punctured, interspaces convex, nearly equally wide, each with a row of small, but acute granules, which are larger and more closely placed near the base than on the disc, each bearing a short, seta-like hair, a cruciform scutellar spot of whitish scales, the arms of which are somewhat oblique, another oblique, more or less interrupted spot of similar scales, about two-fifths from the base and extending from the seventh to the ninth interspaces, some ill-defined transverse lines on the disc; pygidium coarsely but not closely punctured, longitudinally grooved (δ) or convex (φ); underside not closely punctured, punctures large; pectoral canal extending upon the metasternum. Legs long and slender, tibiae straight, slightly curved near the base, middle and posterior broadly emarginate above the apex, tarsi slender, fourth joint shorter than the two preceding joints together, claws armed with a long tooth. Length 2.5-3.0 mm.; 0.10-0.12 inch.

δ . Last ventral segment broadly impressed, middle and posterior tibiae unguiculate at the apex.

Hab.—Texas, Missouri, Georgia.

Closely related to the next species, from which it differs by its more robust form and the elytral interspaces with a row of distinct tubercles. From *longirostris*, to which also it bears considerable resemblance, it differs by the stouter and less elongate beak, and by the tibiae not subangulate near the base. In some specimens the elytral markings are quite effaced, in a few others the oblique lateral spot of the elytra is interruptedly connected with the cruciform scutellar spot, forming thus an angulated band similar to that seen in *Ceut. angulatus* and its allies.

A. ater n. sp.—Very similar to the preceding species, from which it differs as follows: subrhomboidal, more strongly narrowed posteriorly. Beak a little shorter; prothorax distinctly wider than long, more rounded on the sides, dorsal channel quite obvious, entire. Elytral interspaces not distinctly tuberculate, but with rows of close set, very minute, acute asperities, scutellar spot not cruciform, confined to the sutural interspace. Length 3.0 mm.; 0.12 inch.

δ as in *tenipes*.

Hab.—Hazleton, Pa.; Connecticut.

Five specimens in my coll. not differing in size. Agrees with *longirostris* in the elytral asperities and entire dorsal channel of the prothorax, but is at once distinguished by the much stouter and shorter beak of the female and the anterior and middle tibiae not being subangulate near the base.

A. tuberculatus n. sp.—Rhomboidal, robust, black, antennæ and legs piceous, upper surface very sparsely and finely pubescent, pubescence intermixed with large pale scales, underside clothed with dirt-colored scales. Beak stout, not quite as long as the prothorax, slightly widened towards the apex, distinctly carinate, finely striate each side, punctured; antennæ slender, funicle 6-jointed, first joint stout, elongate, joints 2-3 shorter and more slender, three outer joints widened towards the clava, latter elliptic, acuminate; eyes only partially concealed in repose. Head convex, finely and sub-confluently punctured; prothorax one-half wider than long, rounded on the sides, broadly constricted at the apex, anterior margin entire, subangulate each side, lateral tubercles distinct, acute, dorsal channel evident from base to apical constriction; disc closely and not very coarsely punctured; scutel not visible. Elytra little more than one-fourth wider at the base than the prothorax, scarcely rounded on the sides and very distinctly narrowed posteriorly, striæ feebly impressed, punctures not distinct, interspaces a little convex, about equal in width, each with a row of large conical tubercles interrupted by a transverse belt before the declivity, tubercles without setæ, spaces between the tubercles rugulose; pygidium and under surface not coarsely punctured. Legs long, tibiæ very slender, middle and posterior not emarginate above the apex, tarsi slender, third joint not very broadly bilobed, fourth shorter than the two preceding joints combined, claws armed with a long slender tooth. Length 2.5 mm.; 0.10 inch.

Hab.—Arizona.

A female specimen in Dr. Horn's coll. The occurrence of a species with 6-jointed antennal funicle in the subtribe *Celiodes* is rather anomalous. Its nearest ally is *asper*, which it resembles in its prominent and conspicuous elytral tubercles, and from which it differs aside from the 6-jointed funicle by its broader form, equal elytral interspaces, the tubercles not setiferous, and the simple middle and posterior tibiæ.

A. subfasciatus n. sp. Pl. xii, fig. 12.—Broadly oval, pitchy black, legs piceous, tarsi paler; very thinly clothed with a very fine and short pubescence, elytra with patterns of large white scales. Beak elongate, stout, about as long as the prothorax, slightly widened towards the apex, coarsely sculptured, substriate, striæ irregular, with intervening elevated lines, glabrous in its apical third. Eyes concealed in repose. Head convex, coarsely punctured; prothorax more than one-half wider than long, about one-fourth wider at the base than at the apex, rounded on the sides, broadly and not strongly constricted at the apex, postocular lobes strongly developed, apical margin with two minute, rather distinct cusps, lateral tubercles distinct, dorsal channel ill-defined; surface very coarsely punctured; scutel not evident. Elytra one-third wider at the base than the prothorax, not longer than wide, humeri very prominent, rounded on the sides from the humeral prominence to the apex, striæ deep, not wide, punctures rather small, interspaces convex, each with a row of very small, acute granules, each bearing a conspicuous, short hair, a cruciform spot of white scales, the transverse bar about one-third from the base and narrowly separated from an interrupted, lateral fascia a little before the middle; pygidium with large, not close set punctures, more strongly convex in the female; pectoral canal extending upon the

metasternum: underside coarsely punctured. Legs slender, tibiae subparallel, middle and posterior scarcely emarginate above the apex, tarsi slender, third broadly bilobed, fourth shorter than the two preceding joints combined, claws with a short, median tooth. Length 1.75-2.0 mm.; 0.08 inch.

♂. Last ventral segment with a small, rounded and deeply impressed fovea.

Hab.—Maryland; Detroit, Mich.

A male and female specimen are before me, one in the Nat. Mus. coll., the other in my own. A very distinct species, easily recognized by its robust form, small size, long and stout beak, prominent ocular lobes, elytral ornamentation and short clawal tooth. I regret that I have not been able to expose the antennæ for examination without great risk of destroying the specimen; for the same reason I have been unable to examine the tibiae of the male.

A. tachyonoides n. sp. Pl. xii, fig. 13.—Broadly oval, dark, piceous, antennæ and legs rufo-piceous, above sparsely clothed with fine pubescence, interspersed with large, white, erect scales on the elytra; underside sparsely scaly. Beak stout, shorter than the prothorax, a little widened toward the apex in the male, very finely striate and punctured, scrobes expanded posteriorly, antennæ inserted at the middle (♂), rather slender, funicle 7-jointed, joints 1-4 a little elongated, 5-7 short, club oval, subacuminate. Eyes concealed in repose, posterior margin elevated, free. Head convex, finely and not very closely punctured; prothorax as in *subfasciatus*, punctures a trifle smaller; scutell very small. Elytra less than one-third wider at the base than the prothorax, a little wider than long, rounded on the sides to the apex, striae deep, closely punctured, interspaces convex, very rugose, each with a row of very small, acute granules, each bearing a short hair on its summit, a conspicuous white line on the sutural interspace extending about one-third its length; pygidium neither coarsely nor densely punctured, subcarinate in the female, simply convex in the male; pectoral groove extending upon the metasternum; underside not coarsely punctured, punctures rather superficial, somewhat distant on the sternal side-pieces, arranged in rows on the ventral segments. Legs, tarsi and claws as in the preceding species. Length 1.75-2.0 mm.; 0.07-0.08 inch.

♂. Last ventral segment not impressed, middle and posterior tibiae not unguiculate at the apex.

Hab.—District of Columbia (Ulke), Texas (Nat. Mus. coll.).

One male and two females are before me, similar to but quite distinct from *subfasciatus*, from which it is distinguished by its much shorter beak, different elytral ornamentation and the presence of scattered, erect scales on the elytra.

A. longirostris n. sp. Pl. xii, fig. 15*b*.—Robust, oval, entirely pitchy black, above very sparingly clothed with a very short, fine pubescence, underside very coarsely punctured with few scattered scales, legs more densely pubescent. Beak slender, longer than the prothorax (♀), curved, indistinctly subcarinate about the middle third, striolato-punctate, scrobes subparallel, directed against the eyes, antennæ slender, inserted two-fifths from the base (♀), funicle 7-jointed

joints 1-2 elongate, 3-4 short, equal, outer joints scarcely wider. Eyes flattened, not concealed in repose, orbits margined. Head densely punctured, more coarsely on the front; prothorax fully one-half wider than long, less than one-third wider at the base than at the apex, rounded on the sides, broadly and distinctly constricted at the apex, anterior margin slightly emarginate, postocular lobes very feeble, lateral tubercles acute, prominent, dorsal channel entire, less obvious on the disc, foveiform anteriorly, surface rather densely and not coarsely punctured; scutel not visible. Elytra about one-fourth wider at the base than the prothorax, feebly rounded on the sides, distinctly narrowed toward the apex, deeply striato-punctate, punctures close set, interspaces convex, equal, rugose, each with a row of small, acute granules, scutellar region depressed with an indistinct spot of pale scales; pectoral canal extending upon the metasternum; pygidium coarsely punctured, carinate in its apical half. Legs long, anterior and middle tibiae parallel, subangulate near the base, middle feebly emarginate above the apex, posterior curved, acutely angulated and deeply emarginate above the apex, tarsi slender, fourth joint shorter than the two preceding joints together. Length 2.75 mm.; 0.11 inch.

Hab.—Texas.

A female specimen in the Nat. Mus. coll.; it is almost entirely deprived of scales, hence the above description may not be fully applicable in this respect to better preserved specimens. It is, however, readily distinguished from all other species except the next, by its very long and slender beak, and the angulate tibiae; from *epilobii* it differs by its greater size, still more slender beak of the female, the anterior margin of the prothorax feebly emarginate on the sides and at the middle, the very convex head, scarcely prominent eyes, without elevated orbital margin, deep elytral striae and distinct rows of acute granules on the elytral interstices.

A. epilobii Payk. Pl. xii, fig. 15c.—Oval, dark piceous, antennae and tarsi rufous, above irregularly mottled with small white scales, underside not densely scaly. Beak as long as the prothorax, rather slender, curved, cylindrical, bi-striate and punctured, entirely scaly (♂) or subglabrous toward the apex (♀). Eyes prominent, with acutely elevated orbital margin, not entirely concealed in repose. Head moderately convex, densely punctured, front concave between eyes; prothorax one-half wider than long, rounded on the sides, broadly and distinctly constricted at the apex, anterior margin elevated and narrowly emarginate, lateral tubercles distinct, acute, dorsal channel entire, not very distinct, surface closely and not coarsely punctured, inconspicuously mottled with pale scales; scutel punctiform. Elytra less than one-third wider at the base than the prothorax, longer than wide, sides nearly straight, obviously narrowed posteriorly, striae less deeply impressed, punctures small, closely approximate, interspaces convex, alternately a little wider, rugulose, without distinct granules, a very conspicuous, cruciform scutellar spot of white scales, a series of three spots of similar scales and arranged in a curved line before the middle on the fifth, seventh and ninth interspaces; the remaining surface indistinctly mottled; pygidium convex, more finely and less densely punctured in the male, longitudinally impressed

and coarsely punctured in the female; pectoral sulcus extending upon the metasternum; underside with the exception of the first two ventral segments rather densely punctured; tibiae flattened, anterior and middle subangulate, posterior rounded near the base, middle and posterior emarginate above the apex, tarsi stout, densely pilose, underneath with fulvous scales, third joint broadly bilobed, fourth short, scarcely longer than the third, claws with a rather short tooth. Length 2.25-2.5 mm.; 0.09-0.10 inch.

Hab.—Canada, Pennsylvania, Utah (Texas; Lake Sup., Lec.).

Described by LeConte as *C. cruralis*. Agrees in all particulars with well authenticated specimens from various localities in Europe in my collections. This species has the third ventral segment less narrowed at the sides than in any other. The fifth ventral segment has a fovea-like impression in both sexes. A specimen in my collection has the cruciform scutellar spot replaced by a simple basal spot as in *Rhinoneus*; it does not differ otherwise. The lateral spots on the elytra are obsolete in some specimens.

Group II.

The few species constituting this group do not differ in general habitus from those of the first. The metasternum is not excavate for the reception of the apex of the beak; the elytra are without obvious asperities.

But two species belong here, which are distinguished as follows:

Larger, metasternum with an acute, transverse ridge, scales unicolorous, white.

nasalis.

Smaller, metasternum flattened, scales brownish, mottled with white.

nebulosus.

A. nasalis Lec.—Oval, black, antennae and legs piceous, scaly vestiture sparse, scales on upper surface very small, hair-like, intermixed with larger, oval scales. Beak not quite as long as the prothorax (♀), curved, slightly subangulate above, flattened, tricarinate and punctured in its basal half, tapering and glabrous toward the apex, scrobes expanded posteriorly, forming somewhat of a sulcus before the upper part of the eye; antennae slender, inserted at the middle, funicle 7-jointed, joints 1-4 elongate, first joint robust, second joint longer than the others, outer joints scarcely wider, club oval-elliptic, acuminate. Eyes slightly convex, only partially covered in repose, without superciliary ridges. Head densely punctured, front flattened; prothorax one-half wider than long, rounded on the sides, distinctly constricted at the apex, ocular lobes almost obsolete, anterior margin not emarginate, lateral tubercles acute, a spot of condensed scales in front of each, dorsal channel wide, deeply impressed at the base, narrowed and becoming evanescent in front, disc closely and coarsely punctured, especially towards the base; scutel distinct, elytra one-third wider at the base than the prothorax, longer than wide, feebly rounded on the sides and distinctly narrowed toward the apex, striae deep, as wide as the interspaces, punctures distinct, rather large and not closely placed, interspaces convex, transversely rugose.

with a few, very minute granules towards the apex, a broad and conspicuous sutural line, about one-third the length, of white scales; pygidium finely and subconfluently punctured; pectoral canal deep, scarcely wider between the middle coxæ and not extending upon the metasternum, the latter with an acute transverse ridge. Legs rather stout, anterior and middle tibiæ subparallel, the latter distinctly emarginate and subdentate above the apex, posterior a little widened toward the apex with a triangular tooth and acute emargination above the apex, tarsi slender, third joint broadly bilobed, fourth joint shorter than the two preceding joints combined, claws with a slender tooth, scarcely two-thirds the length of the claw. Length 3.0-3.25 mm.; 0.12-0.13 inch.

♀. Third and fourth ventral segments glabrous at the middle, fifth foveate before the apex.

Three specimens, all females, Dr. Horn's, Mr. Ulke's and Nat. Mus. coll. are before me. In two specimens there is a spot of condensed scales on the third interspace near the base, giving thereby somewhat the appearance of a cruciform spot. The formation of the metasternum distinguishes this species from all others of the genus under consideration. Dr. LeConte describes the elytral interspaces as flat; they are, however, convex.

A. nebulosus Lec. Pl. xii, fig. 14a.—Oval, dark piceous, antennæ testaceous, above thinly clothed with very fine, brownish, hair-like scales, with a brassy or cupreous lustre and mottled with spots of larger, whitish scales, underside finely and closely punctured, each puncture bearing a small, oval scale. Beak longer than the prothorax, rather stout, curved, finely striato-punctate throughout in the male, more slender, less densely punctured and glabrous toward the apex in the female, scrobes directed against the eye, antennæ slender, inserted at the middle (♂), or two-fifths from the base (♀), funicle 7-jointed, joints 1-4 elongate, first joint stout, outer joints transverse, club ovate, acuminate. Eyes moderately convex, almost entirely concealed in repose, with elevated orbital margin. Head densely and finely punctured, front slightly ceneave; prothorax more than one-half wider than long, two-fifths wider at the base than at the apex, rounded on the sides, broadly but not distinctly constricted at the apex, ocular lobes more distinct, anterior margin emarginate at the middle with an acute cusp each side, lateral tubercles acute, dorsal sulcus nearly obsolete, surface densely and rather finely punctured; scutellum small, distinct. Elytra two-fifths wider at the base than the prothorax, wider than long, feebly rounded on the sides and obviously narrowed toward the apex, striæ not impressed, narrow, closely punctured, interstices much wider than the striæ, flattened or slightly convex, rugose, with a few distant, acute granules on the apical half, a transverse postscutellar spot, a curved lateral fascia and some irregular spots on the posterior half of the elytra, of white scales; metasternum subtruncate, not excavate. Legs slender, anterior tibiæ slender, parallel, middle and posterior a trifle wider toward the apex, scarcely emarginate, tarsi slender, third joint broadly bilobed, fourth shorter than the two preceding joints together, claws with a slender tooth one-half their length. Length 2.0-2.25 mm.; 0.08-0.09 inch.

Ventral segments semi-glabrous along the middle, fifth ventral segment of male with a large, transversely oval fovea, female with a small, round, well defined impression, middle and posterior tibiæ of male unguiculate at the apex.

Hab.—Canada, Pennsylvania, Georgia, Oregon and Washington.

Easily recognized by the form of the metasternum and its small size. The mottling of the elytra is frequently indistinct; when well marked this species more nearly resembles *subfasciatus*, but differs abundantly by its much finer sculpture and almost entire absence of elytral asperities.

PELENOSOMUS gen. nov.

A peculiar species, unlike any other of the present subtribe known to me, forms the type of this genus. It very much resembles certain forms of *Pelenomus*, from which, however, it differs by the elongate beak, the pectoral canal extended upon the mesosternum and the toothed claws. Beak elongate, somewhat stout, scrobes expanded posteriorly, directed against the eyes, antennal funicle 7-jointed; prothorax wider than long, surface very unequal, broadly and sharply depressed on the sides and in front, excavate between the prominent and acute lateral tubercles and the lateral margin; scutellum minute, glabrous. Elytra suddenly and much wider at the base than the prothorax, not longer than wide, with tufts and crests of erect scales; pectoral canal deep, wider between the middle coxæ and extending upon the mesosternum, mesosternal side-pieces wide, scarcely visible from above; second ventral segment shorter than the two following segments together, prolonged at the sides, the third scarcely attaining the lateral margin; pygidium oblique, acutely margined, with transverse elevated line for reception of the elytral apex. Legs long and slender, femora unarmed, posterior a little more robust, tibiæ very slender, middle and posterior feebly emarginate above the apex, tarsi long, third joint broadly bilobed, fourth shorter than the two preceding joints together, claws armed with a strong tooth about half as long as the claw; surface densely scaly.

Structurally, this genus is closely related to *Auletes*, from which it is distinguished by the great irregularity of the prothorax, the tufts and crests of erect scales on the elytra and the dense scaly vestiture. It is represented by a single species.

P. cristatus n. sp. Pl. xii, fig. 16.—Oval, dark piceous, legs a trifle paler, antennæ testaceous, densely clothed with rather small, grayish white and brownish scales, elytra with crests of erect seal-brown scales. Beak a little shorter than the prothorax, gradually widened from the base toward the apex, densely punctured, pubescent, neither carinate nor striate; antennæ inserted just beyond the middle (♂), first joint of funicle very stout, short, second slender, elongate, joints 3-7 gradually shorter, outer joints not wider, club elliptoidal, acuminate.

Eyes large, somewhat prominent, with a decidedly cupreous lustre. Head densely punctured and scaly, channeled between the eyes; prothorax very little wider than long, dorsal channel distinct, somewhat widened from behind forward and extending to the edge of the anterior declivity, limited laterally by a not very obvious ridge, between this and the lateral tubercle is another oblique, less defined groove or sulcus, anterior margin emarginate at the middle with two small approximate cusps, ocular lobes small, basal margin biemarginate, disc densely and not coarsely punctured. Elytra two-fifths wider at the base than the prothorax, sides straight and parallel for one-half their length, then obliquely narrowed to and separately rounded at the apex; striae fine, feebly impressed, each with a row of scales concealing the punctures, interspaces flat, alternately a little more convex and crested with lines of erect seal-brown scales interrupted by spots and short lines of white, depressed scales, the flattened interspaces without crests, a basal line on the sutural interspace of very dark velvety, but not erect scales, extending almost one-third the length of the elytra; seen from above there is an ill-defined, brownish fascia, extending from behind the humeral callus obliquely to the suture at the juncture of the middle and last thirds; pygidium finely punctured; underside rather coarsely punctured, sterna densely scaly, ventral segments less densely clothed with coarse piliform scales. Legs rather densely scaly. Length 2.25 mm.; 0.09 inch.

♂. Pygidium feebly channeled, with a brush of recurved hair at the apex, abdomen somewhat flattened along the middle, last ventral segment with well defined, transverse fovea, middle and posterior tibiae feebly unguiculate at the apex.

Hab.—District of Columbia.

A single male specimen of this very interesting species in Mr. Ulke's collection.

ORCHESTOMERUS gen. nov.

Beak stout, curved, funicle of antennae 7-jointed. Eyes large, transversely oval and rather convex; prothorax wider than long, narrowed anteriorly, with prominent ocular lobes. Elytra broadly oval, convex, alternate interspaces wider; scutel very minute; pygidium very coarsely punctured; pectoral canal extending upon the mesosternum (*Wickhami*) or metasternum (*Ulkei*); metasternum short, second abdominal segment shorter than the two following segments together, prolonged at the sides, the third segment scarcely attaining the lateral margin, anterior and middle coxal cavities not entirely closed within, the latter scarcely more widely separated than the former; anterior coxae moderately prominent, middle coxae small, globular and closely approximate to the anterior, posterior coxae widely separated; femora deeply sulcate for the reception of the tibiae, posterior strongly incrassate; tibiae simple, tarsal claws toothed.

The species are broadly oval, very convex insects, readily recognized by the strongly incrassate posterior femora. Increased size of

the posterior femora occurs also in other members of this subtribe, notably in *Acanthoscelis*, and also to a less extent in *Polenosomus*, without, however, attaining anything to what we find in the present genus. But two species are known to me, which are distinguished as follows:

Prothorax not gibbous, elytra with cruciform spot of pale scales. Pl. xii, fig. 17.

Ulkei.

Prothorax gibbous, no cruciform elytral spot. Pl. xiii, figs. 18 and 18a.

Wickhami.

O. Ulkei n. sp. Pl. xii, figs. 17, 17a.—Oval, pitchy brown, antennæ and feet testaceous, above sparsely clothed with fine, white piliform scales, underside with similar, though somewhat larger scales. Beak cylindrical, striate and punctured toward the base, pubescent throughout, antennæ slender, inserted at the middle ($\frac{3}{8}$), funicle 7-jointed, first joint stout, second slender and longer than the first, joints 3-4 equal, outer joints gradually wider, club elongate, acuminate. Head closely punctured, squamous, front slightly concave; prothorax nearly one-half wider than long, broadly rounded on the sides and gradually narrowed from base to apex, latter scarcely constricted, transversely impressed in front, ocular lobes prominent, distinct, apical margin feebly emarginate at the middle, obtusely bicuspidate, lateral tubercles distinct, not acute, dorsal channel well impressed in its basal half, gradually narrowed anteriorly and becoming obsolete in front, an obtuse elevation each side about the middle, between this elevation and the lateral tubercle, there is an oblique impression, surface closely punctured, punctures large, especially near the base, the latter emarginate each side, a spot of white scales in front of each lateral tubercle. Elytra convex, about as long as wide, nearly one-third wider at the base than the prothorax, humeri oblique, rounded on the sides and narrowed posteriorly; striae deep, wide, closely and distinctly punctured, interspaces convex, alternately wider, punctured; a conspicuous, cruciform scutellar spot of whitish scales, humeri white, disc with ill-defined spots and bands of condensed white pubescence, mesosternum excavate; femora deeply sulcate, posterior flattened, broadly dilated, broadly impressed near the apex; tibiae parallel, subangulate near the base, less so on the anterior pair, middle and posterior tibiae emarginate externally above the apex, tarsi moderately stout, third joint broadly bilobed, fourth rather short, claws armed with a long acute tooth. Length 2.7 mm.; 0.11 inch.

δ . Last ventral segment with transverse apical fovea, middle and posterior tibiae unguiculate at the apex.

Hab.—New York.

A male specimen in Mr. Ulke's coll., to whom it gives me pleasure to dedicate this species. The specimen before me presents a peculiar aberration, the anterior and middle femora on the left side are quite slender, scarcely clavate, while those on the right side are flattened and impressed near the apex, similar to the posterior pair. I feel at a loss as to what is normal and what otherwise. Should further specimens prove the latter condition to be the normal one, I would

suggest the separation of this species from *Orchestomerus* and place it as the type of a new genus, to which the term *Platymeristes* might be applied.

O. Wickhami n. sp. Pl. xiii, figs. 18, 18a, 18b, 18c.—Broadly oval, convex, brown, antennæ and legs paler, above more densely clothed with small, oval, or pilliform whitish scales, irrorate with brown, underside remotely punctured and sparsely clothed with small, pale scales. Beak stout, much shorter than the prothorax, curved, striate each side, punctured and coarsely pubescent from the base to beyond the middle, scrobes deep, directed against the eyes and expanded toward their extremity; antennæ stout, first and second joints of funicle not elongate, former stout, joints 3-4 equal, outer joints wider, club subcompressed, broadly oval. Eyes large, convex. Head densely punctured, squamose, front depressed between the eyes, a median and supra-orbital line each side, of pale scales; prothorax wider than long, strongly gibbous, very markedly narrowed anteriorly, sides nearly straight, constricted at the apex, ocular lobes prominent, rounded, lateral tubercles large, prominent, rectangular, dorsal sulcus deep, on each side a longitudinal gibbosity, base emarginate each side, disc closely punctured, two lines each side, in front of lateral tubercle of white scales. Elytra scarcely as long as wide, nearly two-fifths and rather suddenly wider at the base than the prothorax, somewhat declivous at the base, rounded on the sides and narrowed from the humeri to the apex, striae more deeply impressed towards the base, punctured, punctures concealed by the scales, alternate interspaces wider and a little more convex, an elevation on the base of the third, fifth and eighth (humeral) interspaces, an elongate scutellar spot of velvety brown scales; pygidium very coarsely and not closely punctured; pectoral canal deep, wide, not extending upon the metasternum; middle coxæ more widely separated than the anterior; femora mutic, anterior and middle subclavate, posterior incrassate; tibiæ rather short, parallel, subangulate near the base, tarsi slender, third joint less broadly bilobed, fourth joint short, claws armed with a long, acute tooth. Length 2.5 mm.; 0.10 inch.

♂. Last ventral segment transversely impressed, middle and posterior tibiæ with a very minute hook at the apex.

Hab.—Brownsville, Texas.

A male specimen collected during the past season and kindly given to me by my friend, Mr. F. H. Wickham, to whom it is with pleasure that I dedicate this addition to the rhynchophorous fauna of our country.

ACALLODES Lec.

Beak stout, curved, widened towards the apex, about as long as the prothorax, scrobes deep, linear, directed against the eye, antennæ inserted two-fifths from the apex (♂ and ♀), scape not attaining the eye, funicle 7-jointed, club elliptic, acuminate. Eyes rounded, not convex, front flattened; prothorax wider than long, ocular lobes prominent, lateral tubercles obsolete, basal margin straight, scutel

not visible. Elytra ventricose, widest at or behind the middle, not obviously wider at the base than the prothorax, striate and punctured; pygidium inflexed, anterior and middle coxal cavities not widely separated, not entirely closed within; prosternum short in front of the coxæ, ante-coxal ridges prominent, acute, mesosternum feebly excavate, metasternum short, perpendicularly declivous in front; anterior and middle coxæ prominent, posterior widely separated; second ventral segment longer than the two following united, the third widely attaining the lateral margin. Legs rather long; thighs, at least the posterior, toothed; tibiae slender, widened at the apex, tarsi moderately stout, third joint broadly bilobed, fourth shorter than the two preceding joints united, claws armed with a long tooth.

The pectoral canal is solely formed by the separated anterior and middle coxæ, the mesosternum is slightly concave, the posterior limit being formed by the mesosternum and the perpendicular metasternum conjointly. Dr. LeConte describes the femora as mutic, which is erroneous; the tooth, while small on the anterior pair, becomes quite distinct on the middle, and still more so on the hind thighs.

I have to add a second species to the one described by LeConte.

Prothorax not much wider than long, not wider at the base than at the middle, elytra with distinct humeral callus, a distinct elytral fascia. Pl. xiii, fig. 19.

ventricosus.

Prothorax much wider than long, widest at the base, neither humeral callus nor elytral fascia. Pl. xiii, fig. 20. **saltoides.**

A. ventricosus Lec. Pl. xiii, figs. 19, 19a.—Ovate, convex, piceous, antennæ and legs rufous, thinly clothed with fine pubescence, thoracic vittæ, scutellar spot and transverse fascia of small, oval, whitish scales. Beak punctured throughout, subglabrous, indistinctly striate each side in its basal half, first joint of antennal funicle robust, second elongate, slender, following joints short, club elliptic, acuminate. Head coarsely punctured, sparsely pubescent; prothorax a little wider than long, less than one-fourth wider at the base than at the apex, sides nearly straight, subparallel for one-half their length, feebly rounded anteriorly, broadly impressed in front, apex scarcely constricted, dorsal channel distinct, becoming wider in front, disc coarsely punctured, punctures more crowded on the sides and behind the apical margin, each bearing a short hair, median vitta and one each side, of pale scales. Elytra scarcely wider at the base than the prothorax, oval, very convex, humeri oblique, callus distinct, sides rounded and subconjointly rounded at the apex, striæ well impressed, shining, strongly and closely punctured, interspaces wider than the striæ, flattened on the disc, more convex on the declivity, rugose, alternately a little wider; a very conspicuous white scutellar line, a suboblique fascia before and a transverse one behind the middle, less conspicuous; these fasciæ are formed by short lines on the interspaces, those on the wider interspaces are placed a little in advance of the others,

the space inclosed between the two fascias is a little darker than the rest of the surface; pygidium not densely punctured, punctures larger and smaller intermixed; sternal side pieces more coarsely, abdomen more finely punctured; femora feebly clavate, all armed with an acute tooth, emarginate before the apex; tibiae unguiculate at the apex in both sexes, claws armed with a tooth. Length 2.75-4.0 mm.; 0.11-0.16 inch.

♂. Pygidium feebly impressed.

Hab.—Eastern, Middle and Southern States.

As will be seen, the measurements given above do not agree with those of LeConte; that author, however, had only two specimens before him, and those evidently of small size. I have taken this species in August on apple trees. In general habitus this species is not unlike the European genus *Scleropterus*, though much larger.

A. saltoides n. sp. Pl. xiii, fig. 20.—Closely allied to the preceding species, from which it differs as follows: Beak distinctly carinate for one-half its length. Eyes more convex, upper margin somewhat elevated. Head more finely punctured; prothorax almost twice as wide as long, two-fifths wider at the base than at the apex, widest at the base, obliquely narrowed on the sides for one-half their length, then rounded, broadly but not deeply impressed before the middle, dorsal channel less distinct, disc much more finely punctured. Elytra wider than long, viewed from above nearly circular, humeral callus obsolete, striae deep, wide, almost as wide as the interspaces, these scarcely unequal, no scutellar spot, some faint traces of an anterior and posterior fascia; pygidium very coarsely and densely punctured. Length 3.35 mm.; 0.13 inch.

♂. Last ventral segment more broadly impressed, hook of middle tibiae quite distinct, prominent.

Hab.—A single male specimen, Minnesota, in the Nat. Mus. coll.

The sutural white spot so conspicuous and evident in every one of the numerous specimens of *ventricosus* before me is entirely absent in the present species. Aside from the elytral markings, however, this species is quite different and distinct in habitus, resembling in this respect very much the Australian *Saleu globosus* Pasc.

CELIODES Sch.

Beak more slender, long and curved, antennal funicle 7-jointed. Eyes rounded, feebly convex and entirely concealed in repose. Elytra wider at the base than the prothorax; pectoral canal limited posteriorly by the metasternum; second ventral segment as long or longer than the two following segments, the third widely attaining the lateral margin; anterior and middle coxal cavities not closed within, anterior and middle coxæ moderately prominent; pygidium perpendicular. Legs moderately stout, femora toothed (in our species), tibiae simple, claws armed with a tooth.

As here defined the characters of the genus, as distinctive from the other genera of the subtribe *Cycliodes*, are negative rather than otherwise. The type of *Cycliodes* Sch. is the European *C. quercus*; this species, however, has the femora mutic and the pectoral canal prolonged to nearly the end of the metasternum and was subsequently made the type of *Megacetes* Thomp.* Of eleven European species of *Cycliodes* in my collection, all, except *guttula* Fab. and *epilobii* Payk. (*Aulentes*) have the second ventral segment longer than the two following together, the latter very short, the third widely attaining the lateral margin.

The two species occurring in our fauna are densely squamous insects, and are distinguished as follows:

Larger, oval, lateral tubercles of prothorax obsolete, lateral spot and apex of elytra pale **apicalis**.
 Smaller, elliptic, lateral tubercles distinct, no elytral spots. **vitiosus**.

C. apicalis n. sp.—Oval, dark brown, antennae and legs a trifle paler, densely clothed above and beneath with oval scales, brownish above with lateral and apical spot of the elytra of pale scales, scales of the underside dirty grayish white. Beak rather slender, curved, longer than the prothorax, subeariate from the middle to near the apex, densely punctured and thinly squamous near the base, serobes directed against and expanded before the eyes; antennae inserted almost two-fifths from the apex (δ and ♀), slender; first and second joints of funicle elongate, following joints shorter, outer a little widened, club elongate or acuminate. Head densely punctured, squamous, front flattened; prothorax scarcely wider than long, moderately narrowed anteriorly, rounded on the sides, apex deeply constricted, deeply impressed behind the apical margin, ocular lobes nearly obsolete, basal margin straight each side, dorsal channel more deeply impressed before and behind or subinterrupted at the middle, lateral tubercles obsolete, indicated by a short ridge-like elevation, surface densely and rather evenly punctured, punctures small, sides clothed with pale scales; scutellum glabrous, scarcely visible. Elytra scarcely one-fourth wider at the base than the prothorax, a little longer than wide, broadly and regularly rounded on the sides, moderately convex, striae fine, deep, punctures very small, each bearing a pale scale, interspaces wide, flat, rugulose, a sutural line from the first third to near the apex, of darker scales with some lustre, an oblique spot on the 6-9 interspaces before the middle and apical margin, of pale yellowish white serobes, the apical pale space encloses a dark spot; metasternum deeply emarginate, excavate; underside of body closely and superficially punctured; femora dentate, obscurely annulate with pale scales near the apex, tibiae somewhat stout and widened towards the apex, obscurely annulate near the base and apex, tarsi elongate, third joint not broadly bilobed, fourth shorter than the two preceding joints, claws armed with a slender tooth about one-half the length of the claw, the first and second joints with several bristle-like hairs arising near the apical margin; pygidium densely and finely punctured, pubescent. Length 2.75-3.25 mm.; 0.11-0.13 inch.

* G. Thompson, Scandinav. Col. I, p. 339.

♂. Fifth ventral segment with transverse oval fovea in its apical half, middle and posterior tibiae distinctly unguiculate at the apex.

♀. Fifth ventral not impressed, tibiae not unguiculate.

Hab.—Pennsylvania, Canada, Ohio, Wisconsin, Michigan, Dakota, Colorado, Texas.

Numerous specimens are before me. Some specimens have the lateral margin of the elytra pale. This species has heretofore been known in collections as *C. flavicauda* Boh.,* the description of which is utterly inapplicable in all essential points, save one, to the insect under consideration. Aside from other differences the following characters certainly do not apply here "thorace medio tenuiter carinata. Elytra antice singulatim rotundata, thoracis basi multa latiora—ante-median fascia transversa communi, subdentata, parce obscura brunneo-squamosa ornati." The size is stated as equal to that of *C. quereus* F., an insect very much smaller, the largest specimen of which, in my collection, does not exceed 2.5 mm. No mention is made of the lateral or apical pale spots on the elytra or a thoracic sulcus. The femoral tooth is described obtuse, while it is quite acute. Boheman refers this species to Say. I have been unable to find any reference or description of *flavicauda* in Say's writings.

C. vitiosus n. sp.—Oval elliptic, convex, dark piceous; antennae, tibiae and tarsi rufopiceous, scales on the underside larger, nearly round, dirty gray, not crowded, above clothed with much smaller, oval, grayish brown scales. Beak slender, curved, obscurely carinate from near the base to the apex, densely punctured, striolate; scrobes linear, not expanded before the eyes; antennae inserted a trifle beyond the middle (♂), not very slender, first and second joints of funicle elongate, joints 3-4 equal, outer joints shorter, gradually wider, club elliptoidal, acuminate. Eyes a little convex, a short sulcus in front of each. Head densely and rather coarsely punctured, squamous, front flattened; prothorax as long as wide, two-fifths wider at the base than at the apex, the latter broadly and strongly constricted, sides straight, parallel for two-fifths their length, then obliquely narrowed to the apical constriction, ocular lobes distinct, apical margin straight-subangulate each side; basal margin not emarginate each side, lateral tubercles distinct, acute, dorsal channel entire, more deeply impressed before and behind the middle, surface closely punctured, punctures rather large. Elytra oval, about one-fourth wider at the base than the prothorax, a little longer than wide, broadly rounded on the sides and strongly narrowed toward the apex, basal margin elevated, striae as wide as the interspaces, not deeply impressed, punctures rather closely approximate, concealed by the scales; interspaces flattened, a line of dark brown scales on the middle two-fourths of the sutural interspace; metasternum as in *apicalis*, femora subclavate, distinctly toothed, tibiae widened towards the apex, tarsi as in the preceding species, claws armed with a tooth extending a little beyond the middle. Length 2.5 mm.; 0.10 inch.

* Sch., Gen. Curc. viii, p. 397.

♂. Last ventral segment transversely impressed, middle and posterior tibiae unguiculate at the apex.

Hab.—Hazleton, Pa.

A male specimen which I collected many years ago. In form this species resembles the European *C. quadrimaculatus* L., but is smaller and without any maculation. The darker line on the middle of the sutural interspace is less distinct than in the preceding species.

Subtribe *Ceutorhynchi*.

A large number of species, all of which, with the exception of one, belong to the genus *Ceutorhynchus*, represent this subtribe, and are at once distinguished from all other members of the present tribe by the pectoral canal not extending beyond the prosternum and the slender, elongate rostrum; antennæ very variable, funicle 7- or 6-jointed. Eyes rounded, lateral, widely separated above and more or less covered in repose; prothorax narrowed anteriorly, generally constricted at or behind the apex; scutell distinct in some, scarcely visible in others. Elytra not much wider at the base than the prothorax, striate and punctured; prosternum long in front of the coxæ, deeply and generally narrowly emarginate, with ante-coxal ridges; mesosternum not canaliculate, oblique (*Ceutorhynchus*), or depressed and transversely sulcate between the middle coxæ (*Rileyonymus*); anterior coxæ narrowly, middle more widely separated; middle coxal cavities entirely enclosed (*Ceutorhynchus*), rarely open within (*Rileyonymus*); second ventral segment not prolonged on the sides, third widely attaining the lateral margin, segments 3-4 short, fifth longer (*Ceutorhynchus*), segments 3-5 longer, equal (*Rileyonymus*); femora either dentate or mutic; tibiae generally slender, middle and posterior unguiculate at the apex in the male (except *angulatus* group), claws bifid, toothed or simple.

As indicated above, the establishment of a new genus seems called for.

Mesosternum oblique, not sulcate, middle coxal cavities closed within, ventral segments 3-5 unequal, third tarsal joint bilobed. . . . **Ceutorhynchus.**

Mesosternum depressed, transversely sulcate, middle coxal cavities open within, ventral segments 3-5 equal, third tarsal joint not bilobed.

Rileyonymus.

CEUTORHYNCHUS.

With the exception of the characters which distinguish the following from the present genus what has been said regards the present subtribe in general applies generically here and not much else needs

to be added. As already stated by Dr. LeConte* the beak is stouter and more coarsely sculptured (generally in Cureulionidæ) and the last ventral segment impressed or foveate in the males.

I have divided the species into the following groups:

Femora toothed.

Vestiture dense, longer species.

Funicle 7-jointedsubpubescens group.

Funicle 6-jointedangulatus group.

Vestiture very sparse, subglabrous, frequently with metallic lustre.

.....sulcipennis group.

Femora mutie.

Funicle 7-jointed, claws toothed.

Elytra distinctly tuberculate*horvathi* (tuberculipennis) group.

Elytra not tuberculate, generally muricate on the declivity, *convexicollis* "

Funicle 7-jointed, claws simplesquamatus group.

Funicle 6-jointed, claws simpleseptentrionis group.

.....subpubescens group.

Species above median size, having the antennal funicle 7-jointed, the claws bifid, or distinctly toothed, rarely (*isolatus*) simple. They are more or less densely scaly or pubescent and may be distinguished as follows:

Claws armed with a long tooth, nearly bifid, less densely scaly or pubescent.

Above clothed with fine brownish pubescence intermixed with large white scales.....**subpubescens**.

Above uniformly clothed with gray or pale ochreous scales.....**affluentus**.

Scales white, not uniform, intermixed with coarse hair....**seriesetosus**.

Claws simple; hirsute.....**isolatus**.

Claws armed with a short, stout tooth.

Scales dense, a conspicuous scutellar spot.

Prothorax cribrate.....**rudis**.

Prothorax more finely punctured.....**sericans**.

C. subpubescens Lec.—Subrhomboidal, pitchy black, above clothed with fine, pale brownish pubescence, intermixed on the elytra with scattered, large, white scales. Beak slender, curved, about as long (♂), or longer (♀) than the prothorax, slightly tapering towards the apex, finely striate and punctured in its basal half, more finely punctured and shining towards the apex, antennæ slender, inserted at the middle (♂ and ♀), first and second joints of funicle elongate, second slender, joints 3-4 very little (♂) or distinctly longer (♀) than the outer joints, club large, ovoidal, acuminate. Eyes round, not prominent, completely concealed in repose by the prominent postocular lobes. Head rather coarsely punctured, coarsely pubescent; prothorax wider than long, fully two-fifths wider at the base than at the apex, latter strongly constricted behind the apical margin, sides broadly rounded, lateral tubercles distinct, placed transversely, dorsal sulcus entire, less profound at the middle, disc densely and rather coarsely punctured;

* Proc. Amer. Philos. Soc. xv, p. 272.

scutel minute. Elytra oval, less than one-third wider at the base than the prothorax, humeri rounded, sides broadly rounded to the apex, declivity somewhat precipitous, the summit with acute granules, striae fine, each with a row of pale piliform scales, punctures very small, interspaces wide, flattened, rugose; pygidium punctured, squamous; underside closely punctured, densely scaly, scales large, grayish white, crowded. Legs slender, femora subclavate, all armed with a large, acute tooth, tibiae subparallel, a little widened at the apex, articulating surface open posteriorly, tarsi slender, third joint broadly bilobed, fourth a little shorter than the two preceding joints combined, claws armed with a long slender tooth, parallel to the claw and about two-thirds its length. Length 2.75-3.5 mm.; 0.11-0.14 inch.

♂. Last ventral segment with a broad, oval fovea, limited each side by a prominent ridge, middle and posterior tibiae unguiculate.

Hab.—California, Utah (Salt Lake City, Wahsah Mountains).

Two male and two female specimens are before me. Very closely related to the next species. Two specimens from Utah are a trifle smaller and have the pubescence a little more coarse. A specimen in Mr. Bolter's coll., which I consider to belong to the present species, has the pubescence entirely grayish white, closely resembling typical specimens of the next.

C. affluentus n. sp.—Oval, black, above uniformly clothed with grayish white, piliform scales not closely appressed to the surface, underside densely scaly, scales whitish, round or oval. Beak longer than the prothorax, cylindrical, of equal thickness throughout, punctured and striate from the base to the insertion of the antennae, more finely punctulate beyond, antennae slender, inserted a little beyond (♂), or before (♀) the middle; first and second joints of funicle elongate, latter slender, joints 3-4 longer than the outer joints, which are a little wider outwardly; club elliptical, acuminate. Eyes, head and general configuration of prothorax as in *subpubescens*; prothorax a little less rounded on the sides, impressed each side before the middle, lateral tubercles small, transverse, dorsal channel entire, more superficial about the middle and terminating in front in a more or less profound fovea; scutel distinct, scaly. Elytra about one-fourth wider at the base than the prothorax, finely striate, punctures very small, concealed by scales, interspaces wide, flattened, rugose, declivity with small, acute granules; pygidium more coarsely punctured. Legs and tarsi as in *subpubescens*; anterior femoral tooth small. Length 3.0-3.25 mm.; 0.12-0.13 inch.

♂. Last ventral segment as in the preceding, middle and posterior tibiae unguiculate.

This species, erroneously known in our lists and collections as *rapae* Gyll., bears only a superficial resemblance to its European congener, while differing in most important structural characters. *C. rapae* Gyll. differs from *affluentus* in the following points: Beak very slender, almost piliform, more finely punctulate and glabrous throughout, except at the base in the female; antennae inserted just before the middle (♂), or scarcely more than one-third from the

base (♀), elytral interspaces more narrow, scarcely double the width of the striae, femora *mutic*, claws *simple*. Length 2.75 mm.; 0.11 inch. Aside from its smaller size it could not be distinguished from *affluentus* on superficial comparison.

Hab.—Canada, Eastern and Western States.

Var.—Above and beneath clothed with pale, ochreous scales, elytral striae with a row of whitish scales.

Occurs in Maryland, Virginia, Illinois, Kansas and Nebraska.

C. seriesetosus n. sp.—Elongate, subtrapezoidal. Black, prothoracic lobes and tarsi testaceous, above irregularly clothed with elongate, dirty white scales, intermixed with coarse hair-like bristles, directed forward on the prothorax, backward on the elytra, underside more densely clothed with pale yellowish, or white, oval or elongate scales without intermixed hair. Beak very slender, longer than the prothorax, subglabrous, very finely punctured, striolate on the sides, antennae slender, inserted about the middle, first and second joints of funicle elongate, latter slender, joints 3-4 a little shorter, outer joints wider, club large, ovoidal. Eyes entirely concealed in repose; head finely and densely punctured, squamous; prothorax one-half wider than long, about two-fifths wider at the base than at the apex, strongly constricted behind the apical margin, rounded on the sides, lateral tubercles distinct, acute, dorsal channel deep before and behind, interrupted at the middle; scutell minute, glabrous. Elytra less than one-third wider at the base than the prothorax, humeri rounded, somewhat prominent, sides nearly straight, gradually narrowed behind, declivity with acute granules, which become quite prominent on the posterior callus, when viewed from above; striae and punctures very fine, punctures rather remote, interspaces flat, somewhat shining, very finely rugose, each with a row of fine punctures, each bearing a whitish seta, a distinct scutellar spot and other spots irregularly scattered of white or pale yellowish scrobes. Legs slender, femora and tibiae more or less scaly or coarsely pubescent; femora with a small, acute tooth, nearly obsolete on the anterior pair; tibiae parallel, not widened at the tip, latter testaceous, third tarsal joint very broadly bilobed, fourth a little longer than the former, claws armed with a large tooth, inclined towards its fellow. Length 3.0 mm.; 0.12 inch.

♂. Last ventral segment impressed, apical spurs distinct, though small.

Hab.—Nantucket Island, Massachusetts.

Three specimens collected by Mr. A. Bolter are before me. A very distinct species, readily distinguished from the preceding by the rows of elytral setae and from the next by the strongly toothed claws.

Since the above was written I have received from Mr. F. A. Sirrine four specimens of this species, three of which were bred from the seed-stalks of kale at Cutchogue (L. I.), N. Y. They are a little smaller in size than Mr. Butler's specimens, the femoral teeth very small, obsolete on the anterior pair.

C. isolatus n. sp.—Oblong, black, antennae piceous, legs rufo-piceous, above thinly clothed with white piliform scales, intermixed with long coarse pubescence,

underside densely and rather coarsely punctured and more densely clothed with elongate scales. Beak slender, one-half longer than the prothorax, cylindrical, a trifle wider at the base, finely striate and punctured in its basal half, subglabrous towards the apex, antennae inserted just before the middle, slender, joints 1-4 of funicle gradually shorter, first joint very robust in the male, and like the second a little more elongate in the female, outer joints very short, club moderately large, ovoidal, acuminate. Eyes entirely concealed in repose. Head densely punctured, front with a flattened or impressed oval space, limited each side by a row of erect scales, the space clothed with white scales; prothorax much wider than long, rounded on the sides behind, profoundly constricted in its anterior third, lateral tubercles represented by an acute, longitudinal ridge, dorsal sulcus entire, not well defined, base broadly emarginate each side; scutell distinct, glabrous. Elytra one-third wider at the base than the prothorax, humeri oblique, sides nearly straight for three-fourths their length, then suddenly rounded to the apex; declivity, and especially the posterior callus, with prominent, acute granules; striae and punctures very fine, superficial, punctures remote, interspaces wide, flattened, each with a row of setigerous punctures, setae long, suberect, a conspicuous scutellar spot and less distinct spots on the disc of condensed white scales; pygidium punctured, subcarinate in the male. Legs not slender, femora subclavate, each armed with a large triangular tooth, tibiae moderately stout, a little flattened, widened towards the apex, third joint of tarsi not broadly bilobed, fourth long, claws simple. Length 2.25 mm.; 0.09 inch.

♂. Last ventral segment feebly impressed, tibial hooks distinct.

Hab.—Montana; Elko, Nevada; California.

Three specimens, Mr. Ulke's and my own coll. The Nevada specimen has the elytral striae coarser and deeper, the elytral setae are pale in two specimens, blackish in the third, the legs entirely ferruginous in one, rufo-piceous in a second and dark piceous in the third specimen, thus showing again the futility of superficial characters in the demarcation of species.

C. rudis Lec. Pl. xiii, fig. 21.—Oblong, oval, piceous, legs rufous, above very thinly clothed with very small, pale brown, piliform scales, variegated on the elytra with scattered spots of pure white and a large scutellar spot of similar scales on the base of the first and second interspaces and extending a little farther on the second interspace than on the first, underside clothed with whitish scales. Beak feebly curved, not slender, somewhat tapering from the base, striate and punctured in its basal half, more finely punctured beyond; antennae slender, inserted before the middle (♀), first and second joints of funicle elongate, former a little stouter, joints 3-4 shorter, outer joints a little wider, club large, ovoidal. Eyes concealed in repose. Head coarsely punctured, each puncture bearing a coarse, brownish hair, an impressed frontal line with white scales; prothorax much wider than long, rounded on the sides behind, strongly narrowed in front and deeply constricted behind the apical margin, latter elevated, lateral tubercles represented by an acute oblique elevation, dorsal channel deep, with a few pale scales, surface very coarsely and deeply punctured, each puncture bearing a coarse hair; scutell distinct. Elytra subtrapezoidal, a little wider at the base than the prothorax, humeri rounded, sides nearly straight, gradually narrowed behind, strongly rounded on the tip, striae impressed, punctured, each with a row of white

piliform scales, interspaces flattened, rugose, declivity with a few very small, but acute granules; femora subelavate, each with a large triangular tooth: tibiae stout, widened from base to apex, latter rounded, tarsi rather stout, third joint not broadly bilobed, fourth short, claws with a short, acute basal tooth. Length 2.8 mm.; 0.11 inch.

Hab.—Nevada, Kansas (LeConte).

A single female specimen in Mr. Ulke's collection. Closely related to *sericans*, from which it is readily distinguished by its very coarsely punctured prothorax.

C. sericans Lec.—Oblong, depressed, pitchy black, above densely clothed with very small, brown scales with a faint pearly lustre and inconspicuously mottled with pale scales, underside densely clothed with dirty white scales. Beak about as long as the prothorax, curved, not very slender, striate and punctured nearly throughout in the male, glabrous in its apical third in the female, antennae slender, inserted scarcely two-fifths from the apex (♂ and ♀), first and second joints of funicle of equal length, former more robust, third joint shorter than the second, longer than the following joints, club elongate elliptic. Eyes concealed in repose. Head channeled, coarsely punctured, clothed with elongate scales, whitish on the front and along the channel; prothorax more than one-half wider than long and two-fifths wider at the base than at the apex, rounded on the sides, narrowly constricted at the apex, apical margin elevated, lateral tubercles distinct, obtuse, posterior to these the lateral margin is straight, disc densely and finely punctured, punctures concealed by the scales, channel entire, more deeply impressed near the base; scutell minute. Elytra trapezoidal and little wider at the base than the prothorax, humeri oblique, prominent, sides nearly straight, narrowed behind, striae well impressed, closely punctured, interspaces flattened, about twice as wide as the striae, declivity not obviously muricate, a conspicuous line on the base of the sutural interspace of whitish scales, scales on the declivity pale. Legs squamous, femora subelavate, all armed with a large tooth; tibiae moderately stout, widened towards the apex, tarsi slender, third joint not broadly bilobed, fourth nearly as long as the two preceding joints together, claws armed with a small, basal tooth. Length 2.5–3.0 mm.: 0.10–0.12 inch.

♂. Last ventral segment with a deep, transversely oval fovea, apical spurs of tibiae distinct, minute.

Hab.—Iowa, Colorado, Arizona, California (LeConte).

Two males and four females. Dr. Horn's and Mr. Ulke's coll.

A very pretty species, the purple gloss is not noticeable in some specimens. Although Dr. LeConte describes the vestiture as "scale-like hairs" and gives the length as 2.0 mm.; there is no doubt of the identity of this species.

angulatus group.

The species belonging to this group have the antennal funicle 6-jointed, the femora (at least the posterior pair) toothed and the claws simple, they all have the elytra ornamented with patterns of condensed scales. The eyes are entirely concealed in repose by promi-

ment prothoracic lobes; the tibiae are not armed at the apex in the males. They are distinguished as follows:

Anterior margin of prothorax deeply and acutely emarginate, elytra with angulated band of white scales. Pl. xiii, fig. 22.....**angulatus**.

Anterior margin of prothorax slightly emarginate in the middle.

Larger species, elytra subdepressed, oblique lateral spot distinct.

Tibiae shorter, stout, widened at the apex, a Ω shaped basal spot. Pl. xiii, fig. 23.....**consanguineus**.

Tibiae long and slender, very little widened towards the apex.

Above clothed with fine, pruinose pubescence, head not sulcate.

disturbatus.

Above clothed with larger white scales, intermixed with brown pubescence, head broadly sulcate..... **obliquus**.

Above clothed with dark gray or fuscous scales, inverted T-shaped spot at base.....**tau**.

Very small, elytra convex, lateral spot wanting. Pl. xiii, fig. 24-**ovipennis**.

C. angulatus Lec. Pl. xiii, fig. 22.—Broadly oblong oval, depressed, black, antennae and legs rufo-piceous, above thinly clothed with very small, pale scales, an angulated band of white scales on the elytra, underside clothed with round, whitish scales. Beak a little (δ) or one-third (φ) longer than the prothorax, rather strongly curved, cylindrical, punctured throughout, indistinctly striolate on the sides, with closely placed, short, suberect scales, scrobes curved, and when viewed laterally, not visible at the middle, antennae slender, inserted about the middle, funicle 6-jointed, joints 1-2 elongate, second slender and longer than the third joint, outer joints short, club large, elliptic. Head superficially punctured, punctures large; prothorax a little wider than long, strongly narrowed in front, ocellar lobes prominent, broadly rounded on the sides, transversely impressed in its anterior half; apical margin elevated, deeply and acutely emarginate, lateral tubercles large, a strongly curved marginal edge, extending from the latter to the apical margin; dorsal sulcus wide, entire, sides and sulcus clothed with white scales; disc densely and coarsely punctured; scutell minute. Elytra one-third, and rather suddenly wider at the base than the prothorax, scarcely longer than wide, slightly narrowed from the humeri three-fifths their length, then suddenly rounded to the apex, posterior callus somewhat prominent, sides feebly rounded, striae impressed, wide, punctures small, more or less concealed by the scales, interspaces convex, rugose, the angulated band extends from below the humerus on the ninth interspace, obliquely and becoming wider to the sixth, then ascends in a curved line to the second interspace to the base, some lines of white scales on the declivity; femora clavate, armed with a very small tooth, almost obsolete on the anterior pair, tibiae rather stout, a little widened at the tip, tarsi slender, first and second joints elongate, first a little longer than the second, third short, broadly bilobed, fourth as long as the first joint, claws small, slender and divergent. Length 3.0-3.25 mm.; 0.12-0.13 inch.

δ . Last ventral segment with a deep, transverse fovea, occupying the whole length of the segment, middle and posterior tibiae not unguiculate.

Hab.—California.

Two males, seven females, Drs. Horn and Hamilton, Mr. Ulke's and Nat. Mus. coll. Dr. LeConte included in this species also the

form hereafter described as *disturbatus*, a quite distinct species. The angulated band is interrupted on the fifth interspace in most specimens. LeConte described the front as concave, it is such in some specimens, flattened or even somewhat convex in others. It is distinguished from all the other members of this group by its broader form and the deeply notched anterior thoracic margins.

C. consanguineus n. sp. Pl. xiii. fig. 23.—Oblong oval, depressed, pitchy black, legs rufous, above rather densely clothed with brown scales, a —○— basal spot and an oblique lateral spot on the elytra of white scales, underside as in *angulatus*. Beak as long (♂), or a little longer (♀) than the prothorax, curved, slender, cylindrical, finely punctured and striate, feebly shining near the apex, scrobes and antennæ as in the preceding, the latter slender, inserted two-fifths from the apex (♂), or a trifle beyond the middle (♀). Head coarsely punctured, front flattened or slightly concave, squamous; prothorax one-half wider than long, strongly narrowed from base to apex, deeply constricted behind the apical margin, sides convergently rounded from the base, ocular lobes less prominent than in *angulatus*, lateral tubercles transverse, not prominent, curved, marginal line in front ill-defined, dorsal channel entire, surface coarsely punctured, channel and sides clothed with pale yellow scales, less conspicuous than in the preceding species; scutellum small, glabrous. Elytra a little wider at the base than the prothorax, humeri obliquely rounded, longer than wide, sides feebly rounded, slightly narrowed posteriorly, striae fine, superficial, punctures concealed by a row of scales, interspaces flattened, the lateral spot extends from the ninth to the sixth interspaces inclusive, the basal spot consists of a spot on the base of the sutural interspace and a short line on the second jointed to a short subtransverse line on the third and fourth interspaces, some scattered white scales on the declivity; pygidium coarsely punctured, scaly, underside densely punctured. Legs stout, femoral tooth very small, acute, anterior and middle tibiæ short and stout, widened to the apex, the latter rounded, posterior tibiæ a little longer and a little more slender, thighs and tibiæ indistinctly annulate with white scales, tarsi as in *angulatus*, but a little stouter. Length 2.5-2.75 mm.; 0.10-0.11 inch.

♂. Last ventral segment with superficial and ill-defined fovea, tibiæ not unguiculate.

Hab.—Nevada. Three specimens in Dr. Horn's coll.

A distinct species, similar to *angulatus*, though less robust; elytral ornamentation very similar, ascending branch absent, the transverse line on the third and fourth interspaces is nearer the base; also resembles the next species in general appearance, but differs in the stout tibiæ and the conspicuous marking at the base of the elytra.

C. disturbatus n. sp.—Oblong oval, dark piceous, above thinly clothed with small, pale scales, scales on the underside round, grayish white, not crowded. Beak slender, curved, a little longer than the prothorax in the male, one-half longer in the female, punctured throughout, more finely in the female, striate in its basal half, scrobes and antennæ as in the preceding species, the latter inserted two-fifths from the apex (♂), or at the middle (♀). Head densely punctured; prothorax wider than long, strongly narrowed in front, rounded on the sides and

deeply constricted behind the anterior margin, latter not elevated, scarcely emarginate at the middle, lateral tubercles distinct, transverse, acute, dorsal channel entire, narrowed from the base to the apex, surface densely and rather coarsely punctured, sides and channel clothed with pale scales; scutellum minute, glabrous. Elytra one-third wider at the base than the prothorax, a little longer than wide, gradually narrowed from the humeral prominence, striae wide, well impressed, closely and distinctly punctured, interspaces rather convex, rugose, posterior callus obsolete, lateral spot as in the preceding species, a spot on the fourth interspace, about one-fourth from the base of white scales, femora feebly clubbed, distinctly toothed, tooth of anterior pair very small, tibiae moderate, widened toward the apex, thighs and tibiae obscurely annulate with white scales, tarsi and claws as in *angulatus*. Length 2.2-2.7 mm.; 0.09-0.11 inch.

♂. Last ventral segment distinctly foveate, tibiae not unguiculate.

Hab.—California, Vancouver, Oregon, Washington, British Col.

Numerous specimens are before me. Confounded with *angulatus*, from which it is sufficiently distinguished by its smaller size, less robust form, the anterior thoracic margin very slightly emarginate and the absence of an angulated elytral fascia. The lateral spot is present in all the specimens before me, the spot on the fourth interspace is occasionally wanting; in some specimens there are some smaller spots near the base and on the declivity.

C. obliquus Lec.—Oblong, subdepressed, piceous, legs rufo-piceous, above clothed with small, brown appressed and larger white suberect scales, the latter predominating. Beak curved, long and slender, longer than the prothorax, punctured and striate, less punctured and somewhat shining towards the apex in the female, scrobes less curved and visible, when viewed laterally, in their whole extent; antennae inserted two-fifths from the apex (♂), or just beyond the middle, first joint of female stout, second joint slender, longer than the third, three outer joints short, club ovoidal. Head broadly sulcate with a crested line each side of stout, erect scales; prothorax a little wider than long, two-fifths wider at the base than at the apex, the latter broadly and strongly constricted, sides rounded, apical margin slightly emarginate at the middle, lateral tubercles large, channel distinct, entire, surface coarsely punctured, sides and channel clothed with elongate, whitish scales; scutellum quite distinct, glabrous. Elytra longer than wide, one-third wider at the base than the prothorax, feebly rounded on the sides and narrowed posteriorly; striae very fine and superficial with a row of white, piliform scales concealing the very small punctures, interspaces wide, flattened, rugose, lateral spot as in *angulatus*, the surrounding space less densely clothed with white scales, thus giving it a shaded appearance, another less conspicuous spot at the apex of the sutural striae; underside densely punctured and scaly, scales large, dirty gray, crowded; femora not robust, tooth rather large, distinct on all, tibiae straight, slightly widened from base to apex, tarsi and claws as in *angulatus*. Length 2.8 mm.; 0.11 inch.

♂. Last ventral segment with large and sharply defined fovea; tibiae not unguiculate.

♀. Pygidium impressed.

Hab.—California (Lec. Nat. Mus. coll.), Arizona (Dr. Horn's and Mr. Ulke's coll.), Texas (A. Bolter), Utah (my own coll.).

Var. A.—Two female specimens in my collection from Utah differs from the typical form in the more finely punctured prothorax, a basal spot similar to, but less defined to that of *C. consanguineus* and interruptedly connected with an ascending line from the oblique lateral spot, the white scales of the elytra more closely appressed, with an irregular row of white piliform scales on each elytral interstice. The femoral teeth are quite distinct in one specimen, almost obsolete in the other.

Var. B.—A female specimen from Texas in Mr. Bolter's collection is less elongate, antennæ testaceous and inserted two-fifths from the apex. Head with a broad fovea, elytral striae deeper, interspaces a little convex, very rugose, the brown scales scarcely evident, scattered, a sutural line of white scales interrupted at the middle third by a black space; pygidium convex, covered with yellowish scales, anterior and middle femoral tooth obsolete, posterior distinct. A distinct variety.

C. tau Lee.—Ovate, narrowed in front and less so behind, depressed, blackish, densely clothed with dark gray scales, which are smaller and more fuscous above. Beak curved, slender, sparsely punctured, striate towards the base. Head densely punctured; prothorax as in *angulatus*, but more oblique rounded on the sides. Elytra less oblong, more distinctly narrowed behind, similarly striate and rugose, with a large scutellar spot like an inverted T, and an oblique lateral spot densely clothed with gray scales; antennæ and legs brown, similar to those of *C. angulatus*. Length 3.0 mm.; 0.12 inch.

One specimen, Texas, Belfrage; also closely allied to the preceding and differing only by form and elytral spots.

I have not seen this species, and can therefore only transcribe the description as given by LeConte.

C. ovipennis n. sp. Pl. xiii, fig. 24.—Oval, convex, pitchy black, tibiae and tarsi paler, above thinly clothed with small, brownish scales, elytral spots of large white scales, underside more sparsely clothed with small, oval, pale scales. Beak rather stout, strongly curved, evenly cylindrical, punctured throughout, antennæ not very slender, inserted a trifle beyond the middle (♀), similar to *C. obliquus*. Head with impressed line, coarsely but not closely punctured; prothorax nearly twice as wide as long, two-fifths wider at the base than at the apex, the latter broadly and deeply constricted, strongly rounded on the sides, lateral tubercles distinct, acute, transverse, dorsal sulcus indistinct except at the base, disc coarsely punctured, punctures crowded on the sides and on the basal half, sides in front and median line clothed with white scales; scutel small, distinct. Elytra oval, convex, very little wider at the base than the prothorax, humeri oblique, sides regularly rounded to the apex, striae fine and more superficial on the disc, wider and more deeply impressed on the sides, distinctly punctured, interspaces somewhat convex, roughened; an oblique line of white scales extending obliquely upward from the sixth interspace to the second and interrupted on the fifth, some

scattered white scales on the disc, especially on the declivity; pygidium transversely impressed each side; underside not densely punctured, punctures rather small, superficial. Legs and tarsi somewhat stout, femora not clavate, tooth, distinct on the posterior pair only, tibiae feebly curved, widened to the apex, first and second joints of tarsi scarcely longer than wide, third more broadly bilobed, fourth joint longer than either of the preceding joints, slender, claws simple. Length 2.2 mm.; 0.09 inch.

♂. Last ventral with a large, well defined fovea; tibiae not unguiculate.

Hab.—Dunsmuir, Cal.; British Columbia. Dr. Horn's and my own coll. Two males.

sulcipennis group.

The species of this group have the femora dentate, the elytra more or less shining and very thinly pubescent, without patterns of condensed scales, except a scutellar spot. The antennal funicle is 6- or 7-jointed, claws toothed or simple. They are all of moderate size and may be distinguished as follows:

Elytra coarsely sculptured, striae deep, sulciform, interspaces with a row of acute granules, claws armed with a long tooth.

Funicle 7-jointed **sulcipennis.**

Funicle 6-jointed..... **decipiens.**

Elytra not coarsely sculptured, without rows of acute granules.

Funicle 7-jointed, claws toothed.

Elytra blue **cyanipennis.**

Elytra aeneous..... **aratus.**

Funicle 7-jointed, claws simple.

Elytra dark blue..... **bolteri.**

Elytra entirely black **hirticollis.**

Funicle 6-jointed.

Entirely ferruginous, elytra acutely tuberculate on the declivity, claws toothed..... **armatus.**

Black, declivity with a few small, acute granules **pollinosus.**

C. sulcipennis Lec.—Oval, black, antennae and tarsi piecous, above very thinly clothed with a very fine, pale pubescence. Beak curved, a little (♂) or considerably (♀) longer than the prothorax, obscurely carinate, finely punctato-striolate throughout in the male, finely punctured and shining beyond the insertion of the antennae in the female; antennae slender, inserted just beyond (♂), or immediately before (♀) the middle, funicle 7-jointed, joints 1-4 clongate, second longer than the others, outer joints short, club elliptoidal, acuminate. Eyes only partially concealed in repose by the feebly developed postocular lobes, round, slightly convex. Head convex, coarsely punctured; prothorax wider than long, strongly narrowed anteriorly, rounded on the sides, widest a little behind the middle, constricted at the apex, lateral tubercles acute, quite distinct, dorsal channel wide, deeply impressed, extending from the base to the apical constriction, surface coarsely and subconfluent punctured; scutell distinct. Elytra ovate, convex, shining, one-third wider at the base than the prothorax, rounded on the sides and narrowed from the humerus to the apex, sulcate, sulci

finely and not closely punctured, interspaces rugose, each with a row of acute, setigerous granules, setae white, recurved, posterior callus obsolete; pygidium coarsely punctured, convex (♂), or slightly foveate (♀); underside coarsely punctured, not densely clothed with whitish scales. Legs slender, thinly pubescent, femora subclavate, armed with a very small, acute tooth, tibiae long, widened toward the apex, tarsi slender, third broadly bilobed, fourth almost as long as the first two joints together, claws armed with a long tooth, curved towards its fellow. Length 2.75 mm.; 0.11 inch.

♂. Middle and posterior tibiae strongly unguiculate.

Hab.—Atlantic, Western and Southern States.

A well-known species; readily known by its very coarse sculpture, in which it resembles the next species, but from which it is at once distinguished by the 7-jointed funicle and the strongly unguiculated tibiae of the male.

C. decipiens Lec.—Subovate, black, antennae and legs rufous, above very thinly clothed with pale, piliform scales, a conspicuous scutellar spot of white scales; underside coarsely but not densely punctured, sparsely scaly except on the thoracic side pieces, which are densely clothed with white scales. Beak curved, separated from the head by a transverse impression, a little longer than the prothorax, cylindrical, indistinctly subcarinate, striate and punctured from the base to the insertion of the antennae, less densely punctured beyond, antennae moderately stout, inserted a trifle beyond the middle, funicle 6-jointed, joints 1-3 elongate, gradually wider, club elliptic. Eyes completely concealed in repose by prominent prothoracic lobes. Head convex, coarsely punctured and pubescent; prothorax wider than long, about one-fourth wider at the base than at the apex, sides subparallel and nearly straight for one-half their length, rounded before the middle, broadly but not deeply constricted behind the apical margin, base emarginate each side, lateral tubercles conspicuous, dorsal sulcus obsolete, densely punctured on the sides and on the base, less so on the disc, punctures coarse, a curved line of white scales each side; scutel scarcely visible. Elytra ovate, rather convex, fully two-fifths wider at the base than the prothorax, broadly rounded on the sides from the humerus to the apex, sulcate, rather coarsely punctured, punctures separated about their own length, interspaces convex, feebly shining, each with a row of setigerous granules, setae subdepressed, coarse, straight, an ill-defined spot near the base of the seventh and a common sutural spot, at the apex, of white scales, there are also some scattered scales on the declivity. Legs not slender, femora subparallel, all armed with an acute tooth, less distinct on the anterior pair, tibiae rather stout, subparallel, very little widened toward the apex, the latter not unguiculate, tarsi slender, third joint bilobed, short, fourth as long as the first joint, claws armed with an acute basal tooth. Length 2.0-2.5 mm.; 0.08-0.10 inch.

♂. Last ventral segment with a deep, transversely oval fovea, tibiae not unguiculate at the apex.

Hab.—Colorado, Michigan, Utah, California, Kansas (LeConte), Pennsylvania (my own coll.).

Very closely resembles the European *Rhytidosomus globulus* in sculpture and general appearance; this insect, however, has the

femora deeply sulcate for the reception of the tibiae, which is not the case in *Ceutorhynchus*; in form it is short, contracted and very convex.

C. cyanipennis Germ.—Oblong, oval, subdepressed, black, elytra steel-blue, shining, antennae and legs piceous, above sparsely clothed with fine, short pubescence and a scutellar spot of white pubescence. Beak a little longer than the prothorax in the male, one-half longer in the female, curved, slender, tapering from the base, striate and punctured from the base to the insertion of the antennae, more finely punctured and shining towards the apex, antennae long and slender, inserted immediately before (♀), or, a trifle beyond the middle, funicle 7-jointed, joints 1-2 elongate, first longer, joints 3-4 shorter than the second, outer joints short, gradually wider, club elliptoidal. Head moderately convex, densely punctured and pubescent; prothorax wider than long, two-fifths wider at the base than at the apex, rounded on the sides, broadly constricted behind the apical margin, less distinctly on the sides, apical margin slightly emarginate at the middle, basal margin broadly emarginate each side, lateral tubercles prominent, dorsal sulcus deep, ending at the apical constriction, surface closely and coarsely punctured; scutel distinct, scaly. Elytra a little wider at the base than the prothorax, feebly rounded on the sides, narrowed behind, striae fine, distinctly and closely punctured, interspaces flat, rugose; pygidium rather finely punctured; underside not densely punctured, punctures small, thoracic side pieces densely clothed with white scales. Legs long and slender; femora feebly clavate, all armed with an acute tooth, small on the anterior pair, tibiae subparallel, slightly widened at the apex, latter not unguiculate, tarsi slender, third joint moderately bilobed, fourth joint equal to the first, claws armed with an acute basal tooth. Length 2.75-3.25 mm.; 0.11-0.13 inch.

♀. Last ventral segment with large, but ill-defined impression and two apical tubercles; tibiae not unguiculate.

Hab.—N. Illinois, California.

Introduced from Europe within recent years. Careful comparison with typical specimens in my collection leave no doubt of its identity. It is readily recognized by its steel-blue elytra, and could only be confounded with *C. bolteri*, from which it differs, by its larger size and toothed claws.

C. aratus n. sp.—Elongate, black, with raneous lustre especially marked on the elytra, above very thinly clothed with fine, short pubescence, underside with the exception of the sternal side pieces, sparsely clothed with white scales. Beak curved and slender, longer than the prothorax, finely striate and punctured from the base to the insertion of the antennae, shining and scarcely punctured beyond, antennae slender, inserted two-fifths from the apex (♂), funicle 7-jointed, joints 1-2 elongate, 3-4 shorter, subequal, outer joints short, club elliptical. Head closely and not coarsely punctured; prothorax wider than long, gradually narrowed from the base, sides feebly rounded for three-fourths their length, broadly but not strongly constricted behind the apical margin, ocular lobes prominent, lateral tubercles small, acute; dorsal channel distinct, wide, not deep, disc coarsely punctured, punctures not crowded, each bearing a short hair. Elytra elongate

oval, moderately convex, a little wider at the base than the prothorax, humeri oblique, somewhat prominent, broadly rounded on the sides, posterior callus obsolete, striae wide, well impressed, distinctly and rather remotely punctured, interstices not much wider than the striae, slightly convex, a scutellar spot of white scales; pygidium not coarsely punctured, anterior coxæ very narrowly separated; femora feebly clavate, middle and posterior with a rather large tooth; tibiae parallel, tarsi rather stout, third broadly bilobed and as long as the preceding joint, fourth short, projecting less than the length of the third, claws armed with a short, acute, basal tooth. Length 2.5 mm.; 0.10 inch.

♂. Last ventral segment deeply impressed in its apical half; tibiae not unguiculate at the apex.

Hab.—Ohio.

A single male specimen in Mr. Ulke's coll. is the type of this interesting addition to our fauna. The bright æneous lustre of the elytra at once distinguishes this species.

C. bolteri n. sp.—Oblong oval, blackish, elytra dark steel-blue, above sparsely clothed with short, fine pubescence, a scutellar spot of white scales, underside finely and not closely punctured, scales grayish white, not dense. Beak curved, slender, somewhat shining, striate and punctured from the base to the insertion of the antennæ, more finely punctured and shining toward the apex; antennæ slender, inserted just before (♂) or at the middle (♀), funicle 7-jointed, first and second joints elongate, joints 3-4 subequal, outer joints short, club elliptical. Head densely punctured, clothed with coarse pubescence; prothorax one-half wider than long, one-third wider at the base than at the apex, narrowed from base to tip, sides feebly rounded, broadly constricted behind the apical margin, the constriction scarcely evident on the sides, dorsal channel less distinct at the middle, ocular lobes prominent, lateral tubercles small, acute, disc not very closely punctured, punctures of moderate size; scutellum small, scaly. Elytra one-fourth wider at the base than the prothorax, humeri oblique, gradually narrowed from the humeral prominence, striae fine, superficial, punctures small, interstices slightly convex, rugose, shining; femora feebly clavate, all armed with an acute tooth, smaller on the anterior pair, tibiae slender, parallel, widened at the tip, tarsi rather slender, third joint bilobed, first and second joints short, subequal, fourth longer than the first joint, claws simple. Length 2.5 mm.; 0.10 inch.

♂. Last ventral segment transversely impressed; middle and posterior tibiae unguiculate at the apex.

Hab.—N. Illinois.

A ♂ and ♀ specimen kindly given to me by Mr. A. Bolter, to whom it gives me pleasure to dedicate this species. The specimens had the label "*C. erysimi* F." attached, and this species certainly bears a very close resemblance to the European, from which, however, it differs by its larger size, the toothed femora and much more slender tarsi. I have specimens of *C. erysimi* F. from France, Belgium, Greece and Karpathes Mountains, widely removed localities, which show no difference whatever. In this species the underside of the body and the legs have a decided æneous lustre.

C. hirticollis n. sp.—Oblong oval, black, elytra with a faint chalybeous lustre, prothorax clothed above with long, coarse pubescence, elytra very finely pubescent, underside clothed with small, piliform scales. Beak long and slender, curved, striate and punctured from the base to the insertion of the antennæ, punctulate and shining toward the apex; antennæ inserted two-fifths from the apex (♂), or at the middle (♀), funicle 7-jointed, joints 1-2 longer, following joints gradually shorter, club ovoidal. Head convex, closely punctured, clothed with elongate, pale yellowish scales; prothorax one-half wider than long, one-third wider at the base than at the apex, rounded on the sides, feebly constricted at the apex when seen from above, anterior half transversely impressed, impression sharply limited posteriorly, anterior margin with two very small, but acute and rather remote cusps, lateral tubercles small, acute, dorsal channel entire and extending through the anterior transverse impression, ocular lobes well developed, sides and basal half coarsely and closely punctured, more finely punctured on the anterior half, transverse impression, dorsal sulcus and a line each side, clothed with long, coarse, pale yellowish pubescence; scutel very minute. Elytra nearly one-third wider at the base than the prothorax, humeri somewhat prominent, gradually narrowed posteriorly, sides broadly rounded, posterior callus feeble, striae well defined, superficial, punctures very small, not closely approximate, interspaces flattened about twice as wide as the striae, finely rugose; underside finely punctured. Legs long and slender, femora armed with a large and very acute tooth, tibiæ subparallel, gradually widened to the apex, tarsi slender, slightly compressed, third joint not broadly bilobed, fourth a little shorter than the two preceding joints together, claws simple. Length 2.5 mm.; 0.10 inch.

♂. Last ventral segment with deep and sharply defined transverse fovea, tibiæ unguiculate.

Hab.—Illinois, Wisconsin.

Mr. A. Bolter's and my own coll. A quite distinct species.

C. armatus n. sp.—Oval, robust, entirely ferruginous, above nearly glabrous, shining, very sparsely clothed with a fine, scale-like pubescence, underside finely and superficially punctured and clothed with small, pale scales. Beak much longer than the prothorax, curved, cylindrical, slightly tapering toward the apex, striate and punctured in its basal half, more shining and punctulate toward the apex, antennæ slender, testaceous, inserted a trifle beyond the middle, funicle 6-jointed, joints 1-3 elongate, first joint longer, second and third equal, outer joints short, club rather small, elongate acuminate. Head convex, densely and coarsely punctured; prothorax wider than long, one-third wider at the base than at the apex, narrowed from the base, rounded on the sides, scarcely constricted on the sides, but deeply impressed behind the elevated apical margin, the latter entire, lateral tubercles absent, dorsal channel obsolete, except a slight impression at the base and at the apex, surface densely punctured, punctures moderate, basal margin straight each side, ocular lobes feeble; scutel minute, glabrous. Elytra scarcely longer than wide, a little wider at the base than the prothorax, narrowed behind, feebly rounded on the sides, striae impressed, wide, strongly and closely punctured, interspaces slightly convex, smooth and shining, each with a row of very fine setigerous punctures, setæ erect, whitish, declivity acutely tuberculate, especially on the fifth, sixth and seventh interspaces; pygidium very small (♀), visible only between the apices of the elytra; anterior coxæ scarcely prominent, antecoxal ridges very acute. Legs slender, femora armed with a small, acute

tooth; tibiæ being slender, parallel, tarsi narrow, third joint feebly bilobed, fourth joint long, claws small, armed with a long basal tooth. Length 2.5 mm.; 0.10 inch.

Hab.—Texas.

A female specimen in Mr. Ulke's coll. A peculiar species, the very small pygidium, not visible from below, the fifth ventral segment filling the apical space between the elytra and the scarcely prominent anterior coxæ, might justify its generic separation, for want of more material, especially the male, I prefer to leave it where it is.

C. pollinosus n. sp.—Oblong oval, black, thinly clothed above, with very small, pale scales, underside densely punctured, each puncture bearing a pale, but somewhat larger scale. Beak rather stout, coarsely punctured throughout, obscurely subangulate about the insertion of the antennæ, the latter inserted two-fifths from the apex (♂), or at the middle (♀), funicle 6-jointed, joints 1-3 longer, club ovoidal. Head densely punctured; prothorax wider than long, strongly narrowed in front, rounded on the sides, broadly and strongly constricted at the apex, ocular lobes not prominent, anterior margin elevated, slightly emarginate, lateral tubercles obtuse, dorsal sulcus entire, disc evenly and coarsely punctured; scutell minute. Elytra one-third wider at the base than the prothorax, humeri prominent, sides nearly straight and very little narrowed posteriorly for about three-fourths their length, striæ rather wide, impressed, closely punctured, interspaces flattened, less than twice the width of the striæ, rugose, with a feeble lustre, sutural interspace glabrous, declivity feebly muricate; pygidium large, densely punctured. Legs moderate, femora feebly clavate, armed with a very small, acute tooth, tibiæ rather stout, a little widened towards the apex, tarsi stout, first and second joints not longer than wide, third moderately bilobed, fourth projecting the length of the preceding joint, claws simple. Length 2.25-2.5 mm.; 0.09-0.10 inch.

♂. Last ventral segment foveate, tibiæ not unguiculate.

Hab.—California. Dr. Horn's and Mr. Ulke's coll.

A male and female specimen are before me. Recognized by its entirely black color and the glabrous sutural interspace.

hornii group.

The species which constitute this group are characterized by the elytra being distinctly tuberculate. The antennal funicle consists of seven joints, the femora are mutic and the claws toothed or cleft. The middle and posterior tibiæ are unguiculate in the males.

Only three species belong here, which are distinguished as follows:

Larger species, above glabrous, claws with a short basal tooth **hornii**.
Smaller, densely squamous, claws bifid.

Elytral interspaces with a row of tubercles. **nodipennis**.

Tubercles confined to the humeral region and the declivity. . . . **adjunctus**.

C. hornii n. sp. Pl. xiii, fig. 25.—Oval, black, depressed, above glabrous, very thinly pubescent, underside densely and finely punctured and clothed with elongate, white scales. Beak moderately slender, curved, very little longer than the prothorax (♂), striate and punctured beyond the middle, shining near the apex, serobes parallel, nearly straight, widened posteriorly; antennæ slender, inserted just before the middle, first and second joints of funicle elongate, former stouter, joints 3-4 shorter, equal, outer joints scarcely wider, club large, ovoidal, acuminate. Eyes round, somewhat convex, not entirely concealed by the feeble post-ocular lobes. Head densely punctured, pubescent, front concave; prothorax one-half wider than long, nearly two fifths wider at the base than at the apex, well rounded on the sides and deeply constricted behind the apical margin, the latter elevated lateral tubercles in form of an elevated transverse ridge, concave on its anterior face, dorsal sulcus entire, ill-defined on the disc and ending in a fovea anteriorly, surface densely punctured, punctures large, superficial, basal margin straight; scutellum elongate, glabrous. Elytra one-third and rather suddenly wider at the base than the prothorax, sides feebly rounded, subparallel for three-fourths their length, then strongly rounded to the apex, striæ sharply defined, not deeply impressed, closely punctured, interspaces wide, each with a row of large, acute tubercles, tubercles directed backward and bearing on their posterior face near the summit a straight and nearly horizontal seta, sutural interspace with a line of white scales, its outer half with a row of smaller tubercles; pygidium perpendicular (♂), slightly inflexed and rather large, punctured; anterior coxæ narrowly separated. Legs long, femora scarcely clavate, mutic, tibiæ slender, gradually widened towards the apex, tarsi slender, first and second joints elongate, third broadly bilobed, lobes long, fourth joint long and slender, projecting the length of the preceding joint, claws armed with a small, obtuse, basal tooth. Length 3.0-3.2 mm. : 0.12-0.13 inch.

♂. Last ventral segment deeply foveate, fovea circumvallate in its anterior half, tibiæ unguiculate.

Hab.—Southern California. Three males, Dr. Horn's coll.

Different from any Ceutorhynchid known to me, and at once recognized by its glabrous, strongly tuberculate elytra and white sutural vitta. I dedicate this species, with pleasure, to my friend, G. H. Horn.

C. nodipennis n. sp.—Oval, depressed, black, densely clothed above and beneath with large, grayish white, or pale ochreous scales. Beak slender, about as long (♂), or much longer (♀) than the prothorax, cylindrical; finely punctate and striate toward the apex and squamose in its basal third, remotely punctulate and shining beyond in the female; antennæ slender, inserted just before the middle (♂), or one-third from the base (♀), first two joints of funicle elongate, first very little stouter than the second, joints 3-4 equal, outer joints a little wider, club large, ovoidal, acuminate. Eyes not entirely concealed by the fairly well developed, prothoracic lobes. Head convex, densely scaly; prothorax wider than long, a trifle over one-fourth wider at the base than at the apex, sides broadly constricted behind the apical margin, the latter elevated, feebly emarginate at the middle, lateral tubercles transverse, prominent, dorsal channel evident, but like the punctures concealed by the crowded, piliform scales, base broadly emarginate each side; scutellum scarcely visible. Elytra one-third and rather suddenly, wider at the

base than the prothorax, subtrapezoidal, a little longer than wide, finely striate, punctures concealed by the scales, interspaces wide, three to eight with a row of large, acute tubercles, each bearing a short setæ on its posterior face near the summit, the fourth interspace is tuberculate in its apical third only, the sixth for two-thirds its length; pygidium perpendicular, small, scaly. Legs densely scaly, femora feebly clavate, tibiæ not slender, widened towards the apex, tarsi slender, first and second joints elongate, the former longer than the latter, third broadly bilobed, lobes long, fourth joint long and slender, nearly as long as the two preceding joints together, claws bifid. Length 2.5 mm.; 0.10 inch.

♂. Last ventral segment with longitudinal fovea; tibiæ unguiculate.

Hab.—Los Angeles, Cal., on a species of *Ceanothus* (Coquillett).

Ten specimens, Nat. Mus. coll., are before me. Very closely related to the next species.

C. adjunctus n. sp.—This species entirely agrees with the preceding in form, habitus and the density of its scaly covering and from which it is to be distinguished by the following characters: scales pale, yellowish white. Legs rufo-testaceous, elytral interspaces alternately wider, elytral tubercles confined to the humeral region and the summit of the declivity, several small tubercles near the base of the sixth interspaces, the wider interspaces with some flattened granules, entirely concealed by the scales and scarcely perceptible. Length 2.25 mm.; 0.09 inch.

♂. Last ventral segment broadly foveate, tibiæ unguiculate.

Hab.—Utah, Nevada.

Dr. Horn's and Mr. Ulke's collections. A specimen in Mr. Ulke's collection bears the label "*C. stanleyi* Schwarz." As I am not aware that this species has been described, and all my efforts to ascertain if such has been done have proven of no avail, I am compelled to consider it a nondescript, perfectly willing to renounce authorship when the original description may come to light.

convexicollis group.

Contains all those species with 7-jointed antennal funicle which have the femora mutic, claws toothed and the elytra at most muricate on the declivity. The species are fairly numerous and more closely allied, presenting no special habitus and varying in size from medium to minute. All have the first and second joints of the funicle elongate, former more robust, joints 3-4 shorter, equal, club variable. The males in all have the fifth ventral segment foveate, and the middle and posterior tibiæ unguiculate at the apex.

The following analytical table, together with the specific descriptions and illustrations, will enable the student to determine his material:

Second and third joints of anterior tarsi together longer than the fourth. Pl. xiv, fig. 31b.

Dark piceous or black, antennal club elongate, acuminate; elytral interspaces without a row of setæ. Pl. xiv, fig. 30.

Lobes of third tarsal joint longer, fourth not projecting more than the length of the third joint. Pl. xiv, fig. 31b.

Oblong, tarsi slender, no sutural vitta.....**mutabilis**.

Broadly oval, tarsi stout, a white sutural vitta.....**ovalis**.

Lobes of third tarsal joint short, the fourth projecting more than the length of the third.

Larger, scales not intermixed with fine pubescence.....**intermedius**.

Smaller, above finely pubescent, sprinkled with larger scales.....**numulus**.

Legs ferruginous, antennal club less elongate, ovoidal (if entirely black, elytra with rows of erect setæ).

Elytral interspaces without rows of setæ.

Densely and uniformly squamous.....**hamiltoni**.

Pubescent above, apical part of elytra more or less rufous.

Tarsi stouter, second and third joints about equal, fourth projecting scarcely more than the length of the third joint.....**pusio**.

Tarsi more slender, joints 1-3 gradually shorter, fourth long, projecting nearly twice the length of the third.....**adpersulus**.

Elytral interspaces with a row of erect setæ.

Larger, oblong, prothorax less rounded on the sides, legs ferruginous.

pusillus.

Very small, entirely blackish, oval, prothorax strongly rounded on the sides.

pauillus.

Second and third joints together, of anterior tarsi, shorter than the fourth; antennal club broadly oval, not acuminate, elytra with rows of suberect setæ. Pl. xiv, figs. 31c, 30a.....**convexicollis**.

C. mutabilis n. sp. Pl. xiv, figs. 30, 31b.—Oblong oval, entirely black, above sparsely clothed with larger, appressed, white scales, intermixed with small, suberect, piliform scales arranged in one or more irregular rows on the elytral interspaces, underside clothed with whitish scales, which are rounded or oval on the sterna, piliform on the abdomen. Beak long and slender, curved, striate and punctured, squamous at the base; antennæ slender, club, elongate-elliptic, acuminate. Eyes not entirely concealed in repose. Head convex, densely punctured, front flattened or slightly concave; prothorax wider than long, one-third wider at the base than at the apex, strongly rounded on the sides, rather suddenly narrowed in front, strongly and broadly constricted at the apex, apical margin elevated, straight or nearly so, ocular lobes prominent, lateral tubercles small, transverse, dorsal sulcus entire, well impressed throughout, disc densely and rather finely punctured, each puncture bearing a coarse, scale-like hair, a line each side and along the dorsal channel of pale scales; scutellum small, glabrous. Elytra a little wider at the base than the prothorax, oblong, a little narrowed behind, slightly rounded on the sides, posterior callus with a group of acute granules, striæ wide, well impressed, distinctly and closely punctured, interspaces somewhat convex, very rugose, a scutellar spot and short sutural line of white scales more or less distinct; pygidium and underside densely punctured. Legs clothed with squamiform pubescence, femora clavate, mutic, tibiæ subparallel, tarsi slender.

der, first and second joints elongate, third broadly bilobed, fourth shorter than the two preceding joints together and projecting as much as the length of the fourth, claws rather large and armed with an acute, basal tooth. Length 2.5-2.75 mm. : 0.10-0.11 inch.

Hab.—Santa Rosa County, California (Dr. Horn), San Francisco County (Nat. Mus. coll., Ulke), Kansas (Ulke).

This species varies considerably in appearance, according as the larger scales are present or not. A specimen in Mr. Ulke's collection from Kansas has the thoracic punctures larger, but does not differ otherwise. Another specimen in the same collection from California differs by its smaller size (2.25 mm.) and the suberect scales on the elytral interspaces arranged in a single row.

C. ovalis n. sp. Pl. xiii, figs. 26, 26a, 26b.—Oval, convex, dark piceous, above thinly clothed with fine, brownish pubescence and scattered, large, oval, white scales, a scutellar spot and sutural vitta of similar scales, underside densely clothed with large, oval, white, or yellowish white scales, especially crowded on the sternal side pieces. Beak not very slender, curved, finely striate and punctured from the base to the insertion of the antennæ, remotely punctured and shining toward the apex, antennæ not very slender, inserted a little beyond (δ), or at the middle (\varnothing), club elongate acuminate. Eyes nearly covered in repose by the prominent prothoracic lobes. Head densely punctured, front flattened; prothorax wider than long, narrowed from the base, the latter one-third wider than the apex, not strongly constricted at the apex, sides broadly rounded, apical margin elevated, feebly emarginate, base nearly straight each side with the autescutellar lobe rather prominent, lateral tubercle obsolete, surface closely and finely punctured, dorsal channel entire, wide and more deeply impressed near the base; sides, anterior impression and median line, clothed with white scales; scutel very small, scaly. Elytra oval, convex, a little more than one-fourth wider at the base than the prothorax, sides rounded, striæ fine, impressed with a row of minute scales, which conceal the closely placed punctures, interspaces wide, flattened, rough, a few, very minute, though acute granules on the declivity; pygidium and underside densely punctured; femora subclavate, tibiæ widened to the apex, feebly curved, tarsi rather stout, the second and third joints together, longer than the fourth, which projects about the length of the preceding joint, the latter broadly bilobed, claws small, with an acute basal tooth. Length 2.75-3.0 mm.; 0.11-0.12 inch.

Hab.—Illinois, Minnesota. Three specimens, Nat. Mus. and Mr. A. Bolter's collection.

A very distinct species which may be readily recognized by its size, oval convex form and conspicuous sutural vitta.

C. intermedius n. sp.—Oblong, black, somewhat depressed, above clothed with small, white and pale brown scales, interspersed with scattered, large, white scales, underside densely covered with large, dirty gray scales. Beak long and slender, curved, shining almost throughout, finely punctulate toward and scaly at the base; antennæ not very slender, inserted one-third from the base (\varnothing), outer joints of funicle widened, club large, elongate, acuminate. Head densely

punctured and scaly, scales grayish white; prothorax wider than long, fully one-third wider at the base than at the apex, strongly rounded on the sides, broadly and strongly constricted at the apex, apical margin elevated, ocular lobes feeble, base broadly emarginate each side, lateral tubercles distinct, obtuse, channel entire, more deeply impressed at the base, and in form of a fovea in front, a longitudinal impression each side in front of the lateral tubercle, disc rather coarsely punctured and clothed with coarse, gray pubescence, paler on the sides and along the dorsal channel; scutell scarcely visible. Elytra about one-fourth wider at the base than the prothorax, a little longer than wide and very little narrowed on the sides for three-fourths their length, then rapidly rounded to the apex, striae deep, wide, closely punctured, each puncture bearing an elongate, white scale, interspaces little wider than the striae, flattened, rugose, small scales suberect and arranged in one or two rows on each interspace, the large white scales condensed in an ill-defined scutellar spot and extending in a line along the sutural interspace, also on the side towards the apex; summit of the declivity with small, acute granules; tibiae slender, parallel, tarsi with the first two-joints elongate, third joint bilobed, rather short, fourth shorter than the two preceding joints and projecting a trifle more than the length of the third, claws armed with an acute basal tooth. Length 2.75 mm.; 0.11 inch.

Hab.—Pennsylvania.

A female specimen in Dr. Horn's collection closely related to the following species.

C. numulus n. sp.—Oblong oval, dark piceous, above clothed with brownish pubescence, a sutural vitta and some scattered scales, white, underside densely clothed with dirty gray scales. Beak long and slender, squamous at the base, finely striate and punctured in its basal half, shining and more remotely punctulate toward the apex; antennae inserted two-fifths from the base ($\text{\textcircled{3}}$), slender, outer joints of funicle scarcely wider, club large, elongate, acuminate. Eyes not completely concealed in repose. Head convex, obscurely sulcate, front impressed, densely punctured and scaly; prothorax more than one-half wider than long and nearly two-fifths wider at the base than at the apex, strongly rounded on the sides and constricted at the apex, apical margin elevated, ocular lobes distinct, prominent, lateral tubercles small, acute, dorsal channel less distinct at the middle, disc coarsely and closely punctured, coarsely pubescent, paler on the sides and along the dorsal sulcus, base slightly emarginate each side; scutell extremely minute. Elytra about one-fourth wider at the base than the prothorax, feebly rounded on the sides and gradually narrowed posteriorly, striae and punctures fine, interspaces wide, flat, rugose, summit of the declivity strongly muricate, a short basal line on the second interspace, of white scales, similar scales aggregated along the base and on the sides towards the apex; pygidium densely scaly. Legs long and slender, femora subelavate, tibiae subparallel, tarsi slender, second and third joints together longer than the fourth, the latter projects a little more than the length of the third joint which is not broadly bilobed, claws with an acute basal tooth. Length 2.25 mm.; 0.09 inch.

$\text{\textcircled{3}}$. Fovea of last ventral segment confined to the apical half, an obtuse tubercle each side.

Hab.—Texas.

A single male specimen, also in Dr. Horn's coll. Very closely

resembles *intermedius*, and, with more material, may prove to be identical. It appears to differ in the much finer pubescence, smaller size, more rounded form, prothorax less deeply impressed in front and the conspicuous sutural vitta; lastly, the far removed habitat from the preceding species should not be lost sight of.

C. hamiltoni n. sp.—Oblong, depressed, reddish brown, head and underside of body dark piceous, above densely clothed with small, yellowish brown scales, slightly variegated with paler scales, scales of the underside pale ochreous and somewhat larger. Beak slender, a little (♂) or considerably (♀) longer than the prothorax, feebly curved nearer the apex, finely punctured, scaly toward the base; antennæ slender, inserted a trifle beyond (♂) or just before the middle (♀), outer joints of funicle scarcely wider, club moderately large, ovoid. Head densely punctured and scaly, front flattened; prothorax one-half wider than long, fully one-third wider at the base than at the apex, well rounded on the sides and strongly constricted at the apex, ocular lobes obsolete, apical margin elevated, slightly emarginate, lateral tubercles small, acute, dorsal channel narrow, feebly impressed, disc densely punctured, punctures small, base biemarginate; scutel minute, glabrous. Elytra longer than wide, less than one-third wider at the base than the prothorax, broadly rounded on the sides and gradually narrowed behind, striæ fine, each with a row of scales concealing the punctures, interspaces wide, rugose, posterior callus with a few asperities; pygidium subcarinate, punctured and scaly. Legs slender, thinly covered with scales, femora not clavate, tibiæ subparallel, tarsi rather stout, first and second joints not elongate, second and third together longer than the fourth; claws with a short, acute basal tooth. Length 2.5 mm.; 0.10 inch.

♂. Last ventral with a deep, round fovea, ♀ with a circular impression.

Hub.—Massachusetts, Cape Cod (Hamilton), Truro (Dr. Horn), Nantucket Island (A. Bolter).

A very distinct species. Specimens in Dr. Hamilton's and Mr. Bolter's collections bear the memorandum "on *Kekele americana*."

C. pusio Mann.—Oval, convex, dark piceous, apical part of elytra and legs reddish brown, above thinly clothed with fine, brownish, scale-like pubescence, with spots and lines of larger, elongate, whitish scales. Beak cylindrical, feebly curved, shining, finely punctured, antennæ slender, inserted about the middle (♂), or two-fifths from the base (♀), outer joints of funicle very little wider, club elongate oval. Eyes not entirely concealed in repose. Head densely punctured and squamous, front impressed along the median line: prothorax wider than long, strongly narrowed from the base to the apex, the latter not constricted on the sides, sides broadly rounded, a wide impression behind the apical margin, lateral tubercles acute, anterior margin with two small, remote cusps, a curved line extending from the lateral tubercles to the apical cusps, dorsal channel obsolete on the disc; disc densely punctured, punctures rather small, ocular lobes feeble, base emarginate each side, sides densely clothed with whitish scales; scutel small, glabrous. Elytra fully one fourth wider at the base than the prothorax, oval, convex, scarcely longer than wide, rounded on the sides and obviously narrowed to the apex, striæ impressed, rather wide, closely punctured, interspaces

slightly convex, rugose, posterior callus feebly muricate, a large scutellar spot of pale scales; pygidium strongly carinate, sterna densely, abdomen more remotely and not deeply punctured, clothed with white scales, more dense on the sternal side pieces. Legs slender, pubescent, femora subelavate, tibiae parallel, a little widened at the apex, tarsi not slender, first joint a little elongate, following two joints equal in length, third broadly bilobed, fourth projecting the length of the third joint, claws with a small basal tooth. Length 2.0-2.2 mm.; 0.08-0.09 inch.

♂. Fovea of last ventral segment large, deep and sharply defined.

♀. Last ventral segment with smaller, rounded and less sharply defined fovea.

Hab.—Western and Southern States, Colorado, Wyoming, Oregon, Vancouver, British Columbia.

Numerous specimens are before me. Dr. LeConte describes the claws as being simple, they are nevertheless toothed, the tooth being very small and readily overlooked. The elytra are more or less reddish brown, at least so, in their apical portion, entirely so in some specimens with the exception of a triangular basal space.

C. adpersulus n. sp.—Oblong oval, dark brown, antennæ, legs and apex of the elytra rufous, above thinly clothed with hair-like pubescence, interspersed with large, oval, white scales; underside densely scaly, scales elongate, piliform. Beak long, curved, striate and punctured towards the base, shining and punctulate beyond the insertion of the antennæ, the latter slender, inserted at the middle (♂), or before it (♀), joints 3-4 of funicle subequal, outer joints gradually wider, club oval, acuminate. Head densely punctured and pubescent, front squamous; prothorax more than one-half wider than long, one-third wider at the base than at the apex, strongly rounded on the sides and deeply constricted behind the apical margin, lateral tubercles transverse, not prominent, dorsal channel obsolete on the disc; disc evenly and closely punctured, punctures small, ocular lobes broad, not prominent, apical margin elevated, base nearly straight each side; sides, apical constriction and median line more densely clothed with white scales; scutell small, glabrous. Elytra longer than wide, one-fourth wider at the base than the prothorax, not markedly narrowed posteriorly, striæ fine, punctures small, remote, interspaces rugose, posterior callus with a few acute granules, a scutellar spot of white scales; femora and tibiae as in *pusio*, tarsi slender, joints 1-3 gradually shorter, fourth joint long and slender, projecting about twice the length of the third, claws with a short basal tooth. Length 2.4 mm.; 0.11 inch.

♂. Ventral fovea rather deep.

Hab.—California, Arizona. Dr. Horn's and Nat. Mus. coll.

Closely resembles the preceding species, but is less narrowed in front and behind, the prothorax more strongly rounded on the sides and more finely punctured, the pubescence is finer and longer, the tarsi more slender with the fourth joint much longer than the third. The white spots on the elytra consist of single, large scales, instead of an aggregation of scales as in *pusio*. Dr. Horn's specimen has the sutural spot prolonged as a sutural line.

C. pusillus Lec.—Oblong, depressed, reddish brown to dark piecous, legs always ferruginous, beneath densely clothed with gray scales, above thinly clothed with pale, scattered scales, each elytral interspace with a row of erect, rigid setæ. Beak a little longer than the prothorax, cylindrical, feebly curved, finely carinate, punctured and striolate near the base, shining and remotely punctulate beyond the insertion of the antennæ, the latter inserted a little before the middle (♂ and ♀), slender, outer joints of funicle not wider, club large, ovoidal-acuminate. Eyes flattened, only partially concealed by the feeble, prothoracic lobes. Head densely punctured, front slightly concave; prothorax wider than long, gradually narrowed from the base and feebly rounded on the sides, constricted at the apex, apical margin elevated, entire, lateral tubercles small, acute, dorsal channel entire, wider towards the base, disc densely punctured, each puncture bearing a short hair on seta, a line each side and along the middle, of pale scales; scutel very minute. Elytra oblong, a little wider at the base than the prothorax, scarcely narrowed for three-fourths their length, then rapidly rounded to the apex, sides very little rounded, striæ deep, closely punctured, interspaces a trifle convex, rugose, with a row of fine, equidistant, setigerous punctures, declivity with a few, very small, acute granules, an ill-defined scutellar spot of pale scales; pygidium small, convex (♂), or scarcely visible between the elytral apices (♀); femora feebly clavate, tibiæ a little widened towards the apex, tarsi very slender, third joint not broadly bilobed, fourth long, projecting more than the length of the third, claws armed with a long, acute tooth. Length 2.0 mm.; 0.08 inch.

♂. Ventral fovea profound, rounded.

Hab.—California.

Dr. Horn's, Nat. Mus. and my own coll. More closely related to *pauvillus* and *convexicollis*. It differs from *pauvillus* by its somewhat larger size, elongate, oblong form, more or less reddish brown color, from *convexicollis* by its more elongate form, less strongly rounded prothorax, hair-like setæ, and especially by the more elongate antennal club.

The scales on the upper surface are easily abraded, giving the insect a hirsute appearance.

C. pauvillus n. sp.—Oval, convex, dark piecous, tibiæ and tarsi paler, beneath clothed with dirt-colored scales, above sparsely clothed with pale scales, elytral interspaces with a row of stiff, suberect setæ. Beak feebly curved, not very slender, shining, finely punctured, striate and scaly towards the base; antennæ slender, inserted at the middle (♂), or immediately before it (♀), outer joints of funicle a little wider. Eyes covered about one-half in repose by the feeble prothoracic lobes. Head densely punctured, front flattened or a little concave, squamous; prothorax one-half wider than long, strongly narrowed in front, well rounded on the sides, apex broadly constricted, apical margin elevated, not emarginate, lateral tubercles rather large, acute, dorsal channel narrow, ill-defined, obsolete on the disc, the latter rather coarsely though not very closely punctured, base bi-emarginate; scutel visible. Elytra fully one-fourth wider at the base than the prothorax, a little longer than wide, narrowed behind, striæ wide, deep, very closely punctured, punctures small, interspaces convex, with a row of setigerous punctures; pygidium coarsely punctured;

femora feebly clavate, tibiae a little wider towards the apex, tarsi stout, first joint a little longer, second short, third broadly bilobed, fourth projecting about the length of the preceding joint, claws armed with a long, acute tooth, almost bifid. Length 1.7 mm.; 0.07 inch.

♂. Ventral fovea ill-defined.

Hab.—New Mexico, N. Illinois. Mr. A. Bolter's and my own coll. The scales on the upper surface are easily rubbed off, giving the insect a very hirsute appearance, similar to *pusillus*. One of Mr. Bolter's specimens has the elytral interspaces more flattened and a scutellar spot of white scales.

C. convexicollis Lec. Pl. xiv, figs. 30a, 31c.—Oblong, pitchy black, legs rufo-piceous, above not densely clothed with large, pale, appressed scales, intermixed with a coarse, suberect, squamiform pubescence, underside not densely clothed with oval or elongate oval, grayish white scales, summit of mesosternal side pieces densely scaly. Beak curved, more or less shining, punctured throughout, more finely towards the apex, striolate and squamose near the base; antennae inserted just before the middle (♂), or two-fifths from the base (♀), slender, outer joints of funicle wider, club large, oval, obtuse, the first joint forming one-half its mass. Eyes completely concealed in repose. Head densely punctured, scaly, front slightly concave; prothorax one-half wider than long, strongly rounded on the sides, constricted at the apex, base nearly two-fifths wider than the former, apical margin elevated, not emarginate, ocular lobes moderate, lateral tubercles small, acute, dorsal channel distinct, impressed, base bi-emarginate, surface coarsely punctured, a median line and one each side interrupted by the lateral tubercle, of white scales; scutell minute, glabrous. Elytra oblong, a little wider at the base than the prothorax, feebly rounded on the sides, slightly narrowed for three-fifths their length, then rapidly narrowed to the apex, striae coarse, closely punctured, punctures more or less concealed by the scales, interspaces convex, roughened, finely muricate on the declivity, a scutellar spot, not well defined, of condensed scales; pygidium densely scaly, legs and tarsi slender, thinly pubescent, first two joints of tarsi somewhat elongate, third short, not broadly bilobed, fourth joint very long, equaling in length the two preceding joints; claws with a short, but acute, basal tooth. Length 2.0-2.5 mm.; 0.08-0.10 inch.

♂. Ventral fovea apical, transverse.

Hab.—Colorado, Idaho, Wyoming, New Mexico, Arizona, Utah, Texas.

Numerous specimens. Dr. LeConte describes the antennae as testaceous, the elytral interspaces as finely alutaceous, these characters I have not found in any specimen; nevertheless, I have no doubt of this being the species described by that author as *convexicollis*.

The appearance of this species varies, according to the presence or absence of the large scales on the upper surface, similar to the two preceding species; from these, as well as all the other species of this group, it is distinguished by the short, obtuse, antennal club,

and the long fourth joint of the tarsi, the tooth of the claws is quite short, and the erect scales of the elytra are striate.

Var. *atomus*.—A small male specimen from Utah, in Mr. Ulke's collection, presents some differences, which, with more material, may prove this to be a distinct species. Beak longer, tapering from the base, front not impressed, prothorax more deeply constricted behind the apical margin, transverse impression in front more sharply limited, a little more coarsely punctured. Elytra wider at the base, alternate interspaces wider, squamiform pubescence semi-procumbent, pale ochreous, arranged in single or double rows, posterior callus with some quite distinct, acute tubercles. The large scales are more pearly white; an indistinct and interrupted sutural vitta. The specimen has an altogether smoother, scarcely hirsute appearance.

squamatus group.

A small number of species comprise this group. They are characterized by the 7-jointed funicle of the antennæ, femora mutic and claws simple; they are of small size, and are distinguished as follows:

Above shining, finely pubescent with scattered larger scales.

Scutellar spot of elongate, whitish scales. **anthonomoides.**

Scutellar spot and transverse fascia behind the middle of the elytra, of large, white oval scales. **squamatus.**

Above, densely scaly or coarsely pubescent.

Tarsi stouter, third joint broadly bilobed, lobes long, fourth joint not projecting more than the length of the third; anterior margin of prothorax emarginate, elytra without rows of acute granules. Pl. xiv, fig. 31.

Oblong, apical cusps of prothorax acute; no elytral spots. **oregoneusis.**

Oval, anterior cusps indistinct, elytra with oblique spot and posterior fascia of condensed scales. **siculus.**

Tarsi long and slender, fourth joint of anterior tarsi projecting more than the length of the third; anterior margin of prothorax entire. Pl. xiv, fig. 31a.

Larger, not shining above, scales large, intermixed with coarse pubescence. **persimilis.**

Smaller, shining, above thinly clothed with long, white hair.

albopilosulus.

C. anthonomoides n. sp.—Oval elliptic, black, antennæ and legs rufopiceous, above, shining, very thinly clothed with fine, whitish pubescence with a few suberect, whitish scales. Beak moderately slender, regularly and rather strongly curved, cylindrical, glabrous, striate and punctured from the base to the insertion of the antennæ, more remotely punctured towards the apex; antennæ rather stout, inserted a little beyond the middle (♂), club ovoidal. Head flattened, very coarsely punctured; prothorax more than one-half wider than long, one-third wider at the base than at the apex, convergently rounded on the sides, constricted at the apex, ocular lobes distinct, lateral tubercles small, acute, dorsal

channel entire, more deeply impressed before and behind, disc uniformly and not densely punctured, punctures moderately large; scutel not visible. Elytra a little wider at the base than the prothorax, humeri oblique, rounded on the sides, striae impressed, closely and distinctly punctured, interspaces wider, flattened, rugulose, a conspicuous scutellar spot on the first and second interspaces of white scales; pygidium finely and subconfluently punctured; underside densely and coarsely punctured, mesosternum and side pieces densely, rest of surface less densely clothed with large, elongate scales, smaller on the abdomen. Legs somewhat robust, tibiae a little widened towards the apex, tarsi moderate, first and second joints elongate, third broadly bilobed, fourth shorter than the two preceding joints together. Length 2.5 mm.; 0.10 inch.

♂. Last ventral segment with rounded fovea, middle and posterior tibiae rather strongly unguiculate.

Hab.—District of Columbia.

A male specimen in Mr. Ulke's collection. This species resembles, somewhat, *Anthonomus flavicornis* Boh.

C. squamatus Lec.—Oval, robust, subdepressed, piceous, antennae and legs rufo-piceous, underside clothed with grayish white scales, crowded on the sternal side pieces, above finely pubescent, scutellar spot and a transverse elytral fascia behind the middle of large, oval scales. Beak long and slender, evenly cylindrical, curved, finely punctured and striate towards the base, more shining towards the apex; antennae inserted immediately before the middle, slender, funicle 7-jointed, first joint stout, second slender and shorter, joints 3-4 subequal, outer joints a little wider, club strongly elongate, about as long as joints 2-7 of funicle. Eyes almost entirely concealed in repose. Head convex, densely punctured, front slightly flattened; prothorax one-half wider than long, narrowed in front and deeply constricted at the apex, ocular lobes moderate, apical margin not strongly elevated, entire, lateral tubercles acute, dorsal channel entire, more deeply impressed and wider toward the base, less distinct at the middle, surface closely punctured, punctures rather small, sides and dorsal channel clothed with whitish scales; scutel evident. Elytra ovate, about one-quarter wider at the base than the prothorax, sides rounded and narrowed towards the apex, striae wide, deep, closely and distinctly punctured, interspaces slightly convex, somewhat shining, rugose, finely muricate on the declivity, besides the scutellar spot and transverse fascia, there are some large, scattered scales, especially along the base; pygidium densely punctured. Legs moderate, femora mutic, subclavate, tibiae parallel, a little wider at the apex, tarsi stout, third joint broadly bilobed, lobes long, fourth joint projecting much less than the length of the third; claws simple. Length 2.2-2.5 mm.; 0.09-0.10 inch.

♂. Last ventral segment with a deep, transverse, oval excavation; tibiae not distinctly unguiculate.

Hab.—Iowa, Kentucky, Illinois.

Three specimens, all males, are before me. An easily recognized species.

C. oregonensis n. sp. Pl. xiv, fig. 31.—Oblong, pitchy black, legs rufous, underside densely clothed with dirt-colored scales, above not densely, with pale brown or grayish yellow, small, elongate scales. Beak not very slender, feebly

curved, shining, finely punctulate, striate and scaly towards the base; antennæ not slender, inserted before (♀) or at the middle (♂), funicle 7-jointed, first and second joints longer, joints 3-7 gradually shorter and wider, club ovoid, acuminate. Head closely punctured and scaly, front concave between the eyes; prothorax wider than long, two-fifths wider at the base than at the apex, rounded on the sides and broadly constricted at the apex, ocular lobes feeble, apical margin elevated, emarginate at the middle with a triangular cusp each side, lateral tubercles acute, dorsal channel narrow, impressed, subinterrupted at the middle, disc closely and rather coarsely punctured, each puncture bearing a coarse, scale-like hair, sides clothed with pale scales; scutellum minute. Elytra subtrapezoidal, less than one-third wider at the base than the prothorax, humeri oblique, prominent, feebly rounded on the sides and slightly narrowed posteriorly, declivity rather precipitous, muricate, striæ not deeply impressed, punctured, each puncture bearing a white elongate scale, interspaces flattened, rather wide, rugose, an irregular, scutellar spot of white scales; femora rather slender, subclavate, tibiae somewhat compressed, widened towards the apex, tarsi stout, first and second joints not elongate, fourth projecting about the length of the third joint, claws stout, simple; pygidium finely punctured and squamous. Length 2.0 mm.; 0.08 inch.

♂. Last ventral segment with an ill-defined fovea and a tubercle-like elevation each side, middle and posterior tibiae unguiculate, more distinctly on the middle pair.

Hab.—Portland, Oreg., Idaho (collected by F. H. Wickham). Dr. Horn's and my own collection. The two specimens from Idaho differ somewhat from the above description; upper surface more densely scaly, scales more yellowish and intermixed with white scales, the dorsal channel is wider and more deeply impressed.

C. siculus n. sp. Pl. xiv, fig. 27.—Oval, rather convex, blackish, antennæ and legs rufo-testaceous, beneath clothed with small, whitish or cream-colored scales, the latter especially on the sternal side pieces, above clothed with a fine, white or pale brown, squamiform pubescence intermixed with larger white scales. Beak rather stout, curved, scarcely as long as the prothorax (♂), finely carinate, punctured, striolate, pubescent throughout; antennæ slender, inserted two-fifths from the apex (♂), first two joints of funicle elongate, first joint stouter, outer joints scarcely wider, club large, elongate, pointed. Head densely punctured, coarsely pubescent, front flattened; prothorax wider than long, strongly narrowed in front, rounded on the sides and constricted at the apex, ocular lobes well developed, apical margin elevated, emarginate at the middle, lateral tubercles small, acute, dorsal sulcus entire, of equal width, not deeply impressed, basal margin straight, disc closely punctured, sides clothed with pale scales; scutellum minute. Elytra scarcely longer than wide, more than one-fourth wider at the base than the prothorax, feebly rounded on the sides and gradually narrowed behind for three-fourths their length, then suddenly narrowed to the apex, striæ fine, punctures small, each bearing a white, piliform scale and more or less concealed by the scaly vestiture, interspaces slightly convex, rugulose, a few very small, acute granules on the summit of the declivity, the latter rather precipitous, an oblique spot extending from below the humerus on the ninth interspace to the sixth interspace inclusive, another spot near the base on the fourth, and another

on the base of the second interspaces, thus forming an interrupted line from the end of the oblique spot on the sixth to the basal spot on the second interspace, a short sutural line and a less distinct post-median fascia of white, piliform scales: anterior coxæ narrowly separated, femora and tibiæ slender, former mutic, the latter widened towards the apex, first joint of tarsi a little elongate, lobes of third rather long, fourth projecting less than the length of the third joint, claws very small, simple. Length 2.0-2.25 mm.; 0.08-0.09 inch.

♂. Fovea of last ventral segment transverse, oval, sharply limited, middle and posterior tibiæ distinctly unguiculate at the apex.

Hab.—District of Columbia, Virginia. Nat. Mus. and Mr. Ulke's collection. Two males.

This species is not unlike *C. obliquus* Lec., from which it differs by its 7-jointed antennal funicle and mutic femora. The two specimens differ considerable in appearance, the specimen in the National Museum is more densely scaly, has the scaly vestiture better preserved and the spots on the second and fourth elytral interspaces large and conspicuous, while the post-median band is evident only on the sides. Mr. Ulke's specimen has the oblique spot quite conspicuous and surrounded by a subglabrous space and the post-median fascia quite distinct, the spot on the fourth interspace is quite small. It seems that the yellowish scales are more easily abraded than the white scales, the former being almost absent in Mr. Ulke's specimens.

C. persimilis n. sp. Pl. xiv, fig. 31a.—Oblong, black, antennæ and legs paler, densely clothed beneath with grayish white scales, above with coarse, grayish, squamiform pubescence intermixed with white scales of various sizes. Beak a trifle longer than the prothorax (♀), cylindrical, curved, glabrous, remotely punctured, finely striate towards and scaly at the base: antennæ piceous, slender, inserted two-fifths from the base (♀), first two joints of funicle elongate, 3-4 short, equal, outer joints scarcely wider, club elliptic, acuminate. Head densely punctured and scaly, front flattened; prothorax a little wider than long, narrowed from the base, broadly rounded on its posterior two-thirds, broadly and deeply constricted behind the apical margin, the latter elevated, entire, a transverse ridge extending from the lateral tubercles towards the median line and limiting posteriorly a broad, transverse groove which occupies the anterior half of the prothorax, dorsal channel widened anteriorly, ocular lobes prominent, base feebly emarginate each side, disc closely punctured, punctures larger on the sides, the latter more densely clothed with pale scales; scutellum small, distinct. Elytra less than one-fourth wider at the base than the prothorax, sides nearly straight and gradually narrowed for three-fourths their length, then obliquely narrowed to the apex, striæ impressed, punctured, more or less concealed by the scales, interspaces slightly convex, each with a row of very small, acute granules, which become larger and more evident on the declivity, a not well defined spot behind the scutellum of white scales; femora feebly clavate, piceous, mutic, tibiæ and tarsi rufo-piceous, the former subparallel, the latter slender, first and second joints elongate, compressed, third broadly bilobed, fourth long and slender, pro-

jecting more than the length of the preceding joint, claws small, simple. Length 2.0 mm. : 0.08 inch.

Hab.—Nevada.

A female specimen in Mr. Ulke's coll. It bears the label "*C. convexicollis* Lec.," to which, indeed, it bears a close resemblance, the prothorax, however, is less strongly rounded on the sides and the claws are simple.

C. albopilosulus n. sp.—Oblong oval, pitchy black, underside not densely clothed with elongate with scales, above very sparsely clothed with long, suberect, white, hair-like scales. Beak long and cylindrical, strongly curved, glabrous, remotely punctulate in its apical half, striate from base to middle, antennæ slender, inserted a little before the middle, first joint of funicle elongate, a little robust, joints 2-4 about equal, longer than wide, outer three joints transverse, gradually wider, club rather large, ovoidal, pointed. Head closely punctured, pubescent, front flattened with concentric rows of punctures; prothorax a little wider than long, two-fifths wider at the base than at the apex, widest before the middle, strongly rounded on the sides and deeply constricted behind the apical margin, a narrow impressed line before the basal margin, giving a somewhat constricted appearance, broadly impressed in front, lateral tubercles rather large, prominent, acute, a row of small, acute granules extending from the lateral tubercles towards the median line and a few small granules exterior to the tubercles, an acute tubercle each side of the dorsal channel, the latter subinterrupted before the middle, impressed in the form of a round, deep fovea behind the apical margin, the latter strongly elevated, entire, ocular lobes nearly obsolete, base feebly emarginate each side; scutell evident, glabrous. Elytra one-fourth wider at the base than the prothorax, subquadrate, a trifle longer than wide, finely striate and punctured, punctures rather small, interspaces wide, somewhat shining, each with a row of acute granules which become larger and tuberculiform towards the declivity, a short, ill-defined line of white scales behind the scutell; femora clavate, tibiæ subparallel, a little wider towards the apex, tarsi slender, third joint broadly bilobed, fourth long and slender, projecting decidedly more than the length of the third joint, claws simple, rather long and slender, widely divergent. Length 1.75 mm. : 0.07 inch.

Hab.—Los Angeles, Cal.

A female specimen in the National Museum coll. A very distinct species; its nearest ally is *persimilis*, from which it differs by its smaller size, long and sparse pubescence, obsolete prothoracic lobes and the row of acute granules on the prothorax; the granules on the elytral interspaces are larger.

septentrionis group.

The species belonging to this group are all small in size and are readily distinguished from those of the preceding groups by the 6-jointed funicle of the antennæ, the unarmed femora and the simple claws; joints 1-3 of the antennal funicle elongate, the outer three

joints short, club variable. The middle and posterior tibiæ are unguiculate in the males, simple in the females. They are distinguished as follows:

Elytral with sutural vitta. Pl. xiv, figs. 28, 29.

Elytra black, shining, apical part rufous, a white lateral spot... **semirufus**.

Elytra brown, pubescent..... **medialis**.

Elytra without sutural vitta, at most a scutellar spot or line of pale scales.

Above clothed with fine pubescence, more or less shining.

Larger, 2.0 mm. or more, prothorax finely and evenly punctured.

Legs red, fourth tarsal joint long..... **erythropus**.

Legs blackish, fourth tarsal joint shorter..... **mfrosus**.

Very small, less than 2.0 mm., prothorax coarsely and not evenly punctured, **atriculus**.

Dark, blackish, above coarsely pubescent.

Larger, antennæ of male inserted beyond the middle, pubescence more appressed..... **septentrionis**.

Smaller, antennæ of male inverted before the middle, pubescence less appressed..... **puberulus**.

Elytra and legs brownish red, squamous above..... **zimmermanni**.

C. semirufus Lec. Pl. xiv, fig. 28.—Oval elliptic, nigro-piceous, apical half of elytra and legs ferruginous, shining, above very thinly clothed with short, fine pubescence and large, scattered scales, sutural vitta and lateral spot of the elytra of large white scales, underside densely clothed with similar scales. Beak curved, tapering from the base, subcarinate and striate each side in its basal half, shining and remotely punctured towards the apex; antennæ inserted immediately before (♀), or at the middle (♂), first two-joints of funicle long, about equal, third shorter, outer joints wider, club ovoid. Head coarsely and closely punctured; prothorax wider than long, fully one-third wider at the base than at the apex, the latter broadly and strongly constricted, sides rounded, rather suddenly narrowed in front, ocular lobes prominent, apical margin elevated, entire, fuscous, lateral tubercles transverse, acute, distinct, sides deeply impressed in front of the tubercles, dorsal channel deeply impressed in front and near the base, almost interrupted at the middle, disc rather coarsely but not closely punctured, sides and channel densely clothed with yellowish white scales; scutel minute, glabrous. Elytra less than one-third wider at the base than at the prothorax, longer than wide, broadly rounded on the sides and gradually narrowed from humerus to apex, striae rather wide, impressed, distinctly and closely punctured, interspaces flattened, shining, slightly rugulose and finely punctulate, declivity with a few very minute, acute granules; pygidium densely punctured; femora feebly clavate, mutic, tibiæ subparallel, wider towards the apex, tarsi stout, second joint short, lobes of third joint rather long, fourth not long, projecting less than the length of the preceding joint, claws slender, simple. Length 2.0 mm.; 0.08 inch.

♂. Lust ventral segment impressed, impression limited each side by ridges converging towards the apex.

Hab.—Buffalo (New York), Canada, Detroit (Michigan).

Distinct and easily recognized by the ferruginous apical half of

the elytra, conspicuous white sutural vitta and lateral spot. Dr. LeConte gives the size as 1.3 mm. The eight specimens before me show no difference in the measurement given above. This author's reference to the supposed relationship of the present species to the European *C. quereeti* Gyll.* is erroneous, the latter species is larger, antennal funicle 7-jointed, the vestiture consists of a coarse pubescence without sutural vitta or lateral spot of the elytra, the latter are rufous at the apex, the only approach to similarity I can find.

C. medialis Lec. Pl. xiv, fig. 29.—Oblong oval, brownish piceous, above clothed with pale, scale-like pubescence, sutural interspace and base of second interspace densely, sides behind the middle of the elytra, less densely clothed with dirty white scales, underside densely clothed with similar scales. Beak slender, curved, finely punctured, nearly smooth towards the apex, finely striate each side towards the base, the latter scaly; antennæ slender, inserted two-fifths from the base (♂), joints 1-3 of funicle long and slender, outer joints wider, club elliptic pointed. Head densely punctured and scaly; prothorax wider than long, one-third wider at the base than at the apex, feebly and convergently rounded on the sides behind, rather suddenly narrowed in front and broadly constricted at the apex, ocellar lobes distinct, lateral tubercles small, acute, dorsal sulcus entire, more deeply impressed near the base, surface finely and not very closely punctured, basal margin straight each side; scutellum minute, scaly. Elytra a little wider at the base than the prothorax, longer than wide, sides nearly straight and narrowed behind for three-fourths their length, then obliquely narrowed to the apex, posterior callus obvious, muricate, striae well impressed, closely punctured, punctures more or less concealed by the pubescence, interspaces flattened, rugose; pygidium closely punctured and scaly. Legs, tarsi and claws as in *semirufus*. Length 2.4 mm.; 0.09 inch.

♂. Last ventral segment with deeply impressed apical fovea, limited each side by an oblique acute ridge.

Hab.—Louisiana: Bayou Sara and New Orleans; Lake Superior (LeConte).

A male specimen in Dr. Horn's coll. and four in Nat. Mus. coll. are before me, and agrees in all particulars with Dr. LeConte's description except that the prothoracic lobes are quite distinct, and the prothorax is not strongly punctured.

C. erythropus n. sp.—Oblong oval, blackish, legs reddish brown, above clothed with a fine pubescence, consisting of short, suberect, hair-like scales, and having a faint, brassy lustre. Beak long, curved, somewhat tapering from the base to the apex, striate and punctured in its basal half, shining, finely punctured and striolate towards the apex; antennæ slender, inserted a little beyond the middle (♀), joints 1-2 of funicle elongate, the former a little more robust, joints 3-6 gradually shorter, scarcely wider towards the clava, the latter elongate acuminate. Head finely and very closely punctured; prothorax more than

* Proc. Amer. Philos. Soc. xv, p. 279.

one-half wider than long, one-third wider at the base than at the apex, well rounded on the sides and strongly constricted at the apex, ocular lobes broad, not prominent, apical margin not much elevated, lateral tubercles somewhat transverse, small, acute, channel linear, interrupted at the middle, superficial, except at the base, disc evenly and rather finely punctured, basal margin nearly straight each side; scutell scarcely visible. Elytra one-fourth wider at the base than the prothorax, longer than wide, feebly rounded on the sides, the latter subparallel for three-fourths their length, then obliquely rounded to the apex, striae fine, punctures not closely approximate, interspaces flattened, rugose, posterior callus with a few very minute, acute granules; pygidium closely punctured, underside not densely clothed with small, whitish scales; femora slender, mutic, tibiae subparallel, a little wider towards the apex, tarsi rather slender, first two joints a little elongate, third broadly bilobed, lobes long, fourth joint slender, projecting about the length of the preceding joint, claws simple, slender, divergent. Length 2.0 mm.; 0.08 inch.

Hab.—District of Columbia.

A female specimen in Mr. Ulke's coll., closely related to the next. The insertion of the antennæ beyond the middle of the rostrum in the female is worthy of note.

C. morosus n. sp.—Very closely resembles *rufipes*, with which it agrees in all particulars, except the following: Black, tibiae and tarsi picuous, antennæ reddish brown, inserted two-fifths from the base (♀), joints 1-3 of funicle elongate, slender, 4-6 short; prothorax very densely punctured in its basal half. Elytra shining; tibiae slender, parallel, not at all widened to the apex, fourth tarsal joint shorter, projecting less than the length of the third joint. Length 2.25 mm.; 0.09 inch.

Hab.—Virginia.

A female specimen in Mr. Bolter's coll. It is with some hesitation that I consider this as distinct from *erythropus*. The single specimen is very much abraded, but what is left of the pubescence would seem to indicate that it is finer than in *rufipes*, the hair-like scales are bistriate under high amplification, a character not observed in *rufipes*. The difference in the insertion of antennæ is very marked, both type specimens being females, likewise the relative length of the fourth tarsal joint.

C. atriculus n. sp.—Oblong oval, black, antennæ testaceous, very thinly clothed with a fine, scale-like pubescence, scales a little larger on the underside than above. Beak slender, cylindrical, regularly curved, finely striate and punctured towards the base, somewhat shining and more remotely punctulate towards the apex; antennæ slender, inserted at the middle, funicle 6-jointed, first joint more robust, second a little longer than the third, clava rather large, oval elliptic, dusky. Head rather wider, feebly convex, very closely punctured; prothorax a little wider than long, broadly rounded on the sides, rather broadly, but not strongly constricted at the apex, apical margin somewhat elevated, entire, lateral tubercles small, acute, base biemarginate, dorsal channel obscure, more evident

anteriorly, surface closely and somewhat coarsely punctured; scutellum minute. Elytra oblong, about one-fourth wider at the base than the prothorax, sides nearly parallel, feebly rounded, striae well impressed, distinctly and rather closely punctured, interspaces moderately wide, outer ones a little more convex, rugulose. Legs slender, femora scarcely clavate, tibiae a little widened towards the apex, tarsi a trifle compressed, third joint broadly bilobed, lobes rather long, fourth joint projecting about the length of the preceding joint. Length 1.75 mm.; 0.07 inch.

Hab.—Pennsylvania.

A female specimen of this very small species in Mr. Ulke's coll.

C. septentrionis Gyll.—Oblong oval, black, antennae rufo-testaceous, legs piceous, above clothed with a pale, coarse pubescence, scales striolate and having a faint, metallic lustre, underside more densely clothed with small, oval, or elongate, dirty white scales. Beak long, curved and cylindrical, striate and punctured from the base to the insertion of the antennae, shining and finely punctured towards the apex; antennae slender, inserted a little beyond the middle (δ), or two-fifths from the base (φ), joints 1-3 of funicle elongate, three outer joints short, gradually wider, club elliptic, pointed. Head rather coarsely punctured and coarsely pubescent; prothorax a little wider than long, narrowed in front, well rounded on the sides and strongly constricted at the apex, the constriction narrow on the sides, extending backward and becoming wider above, ocular lobes broad, feeble, apical margin not much elevated, entire, lateral tubercles small, dorsal channel foveiform in front and at the base, nearly obsolete at the middle, surface closely and rather coarsely punctured, each puncture bearing a coarse and scale-like hair; scutellum small, glabrous. Elytra longer than wide, about one-fourth wider at the base than the prothorax, sides broadly rounded from humerus to apex, posterior callus not very evident, declivity very finely muricate, striae impressed, punctures small, not approximate, interspaces flattened, rugose, scales arranged in two or three irregular rows, an inconspicuous scutellar spot of pale scales; pygidium very coarsely punctured, femora clavate, mutic, tibiae widened towards the apex, tarsi rather slender, first two joints elongate, third broadly bilobed, fourth projecting less than the length of the third joint, claws simple, slender and rather approximate. Length 2.0-2.25 mm.; 0.08-0.09 inch.

δ . Last ventral segment with a broadly oval fovea occupying the middle two-fourths of the segment.

Hab.—New York, New Jersey, Virginia, Illinois.

Closely related to the next species. The scutellar spot is entirely absent in some specimens.

C. puberulus Lec.—Resembles *septentrionis*, from which it differs as follows: The scale-like pubescence is less appressed, the beak longer and more slender, especially in the female, thoracic channel more evenly impressed, not interrupted at the middle; the antennae of the male are inserted before the middle; the scutellar spot of the elytra is more distinct and the pygidium more finely punctured. It is a trifle smaller.

δ . Last ventral segment with a fovea occupying the middle third of the segment, a tubercle-like elevation each side of the fovea.

Hab.—Pennsylvania, Wisconsin, Michigan, Texas; Alameda County, California.

But for the difference in the insertion of the antennæ and the formation of the ventral fovea in the male, a specific differentiation from *septentrionalis* would not be tenable. The California specimens are a little longer than the eastern, and agree in size with the preceding species.

C. zimmermanni Gyll.—Oblong, elliptic, piceous; beak, antennæ, elytra and legs reddish brown, above thinly clothed with white, oval scales, intermixed with a suberect, squamiform pubescence, underside densely clothed with whitish scales. Beak cylindrical, slender, curved, striate each side from the base to the insertion of the antennæ, shining and finely punctured beyond, a little stouter at the base and tapering towards the apex in the female; antennæ inserted about two-fifths from the apex (♂), or just beyond the middle (♀), first two joints of funicle elongate, joints 3-4 a little shorter, subequal, outer two joints wider, club elliptic, pointed. Head closely punctured, front flattened, thinly scaly; prothorax wider than long, narrowed in front, rounded on the sides and broadly constricted at the apex, ocular lobes prominent, apical margin elevated, entire, lateral tubercles very small, acute, dorsal channel feebly impressed, more distinct at the base, surface closely and rather coarsely punctured, coarsely pubescent; scutellum minute, scaly. Elytra oblong, a little wider at the base than the prothorax, slightly narrowed from the humerus for three-fourths their length then obliquely to the apex, posterior callus rather distinct, finely muricate, striae impressed, distinctly punctured, interspaces shining, rugulose; pygidium densely and finely punctured, a scutellar spot, not well defined, of pale scales; femora feebly clavate, tibiae scarcely widened towards the apex, tarsi stout, first two joints not elongate, third not broadly bilobed, fourth slender and projecting about the length of the preceding joint, claws simple, slender. Length 1.75 mm.; 0.07 inch.

♂. Last ventral segment with a rounded or oval, not sharply defined fovea.

Hab.—Eastern and Western States.

Easily recognized by its small size and pale brownish color. The difference in the beak, as well as in the insertion of the antennæ in the two sexes, is worthy of note.

RILEYONYMUS gen. nov.

Beak long and slender, tapering, antennæ slender, funicle 7-jointed, club short, ovoidal, acuminate. Eyes small, surmounted by a lateral expansion of the front and scarcely visible from above; front broadly concave, expanded laterally into a triangular projection, occiput more narrowly concave and separated from the frontal excavation by a not very obvious transverse ridge; prothorax wider than long, strongly and sharply narrowed in front, ocular lobes large, prominent, apical margin elevated, lateral tubercles prominent, obtuse, basal margin deeply bisinuate; scutellum not visible. Elytra longer

than wide, alternate interspaces wider, with tufts of elevated scales; prosternum long in front of the coxæ, narrowly and deeply emarginate, ante-coxal ridges acute; mesosternum depressed between the coxæ, transversely sulcate; metasternum shorter than the first ventral segment; first and second ventral segments longer than the three following, separated by a straight suture, segments 3-5 equal; anterior coxæ prominent, rather narrowly separated, middle coxæ more widely separated, not enclosed within by the coxal cavities; femora toothed, tibiæ widened to the tip, tarsi narrow, third joint scarcely wider than the others, claws approximate at the base, simple.

A very peculiar insect forms the type of this genus. The mesosternum being depressed between the coxæ gives a deceptive appearance of being canaliculate and forming part of the pectoral canal. The broadly excavate and expanded front, the equal length of the three last ventral segments and the narrow tarsi, form a complex of characters which does not permit the reception of the single species into the old genus *Ceutorhynchus*. It is from a profound regard to the memory of that eminent and lamented scientist, Prof. C. V. Riley, that I dedicate this genus to his name.

Represented by a single species.

R. relictus n. sp. Pl. xiv, figs. 32, 32a, 32b.—Oblong elliptic, dark piceous, above densely clothed with large, imbricate scales, varying in color from pale ochreous to dark brown, underside clothed with dirty ochreous, densely matted scales. Beak curved in its basal half, shining, finely punctured, striate near the base; antennæ slender, inserted two-fifths from the base (♀), scape not attaining the eye, funicle 7-jointed, first joint stout, outer joints gradually decreasing in length, concavities of the head densely clothed with pale scales, frontal excavation with a longitudinal, ridge-like elevation; prothorax about one-half wider than long, sides straight for two-fifths their length and slightly convergent, then rapidly narrowed in front, apex broadly and strongly constricted, profoundly impressed about one-third behind the anterior margin, the latter strongly elevated, deeply and narrowly emarginate at the middle, ocular lobes prominent, a transverse ridge extending from the prominent, but obtuse, lateral tubercles across the disc, semi-interrupted by the dorsal channel and bearing several acute denticles each side, disc in front of this ridge precipitous, dorsal channel profound, entire, narrowed from the middle both towards the apex and the base, punctures concealed by the scaly vestiture, the latter intermixed with erect, blackish claviform scales, directed forward, a median line and one each side of pale scales. Elytra nearly one-third wider at the base than the prothorax, humeri rounded, prominent, sides nearly straight from the humeral prominence for three-fourths their length, then rapidly rounded to the apex, striae impressed, sculpture completely concealed by the scales, interspaces alternately wider, convex, the dark brown velvety scales erect, forming elongated spots on the wider interspaces, alternating with pale spots of appressed scales, each interspace with a row of dark brown, erect

setæ, a velvety spot one-fourth from the base on the first and second interspaces, a little prolonged on the sutural interspace; posterior callus rather prominent; pygidium densely scaly, underside closely and not coarsely punctured; femora rather slender, with a large, acutely triangular tooth, tibiæ not long, distinctly widened from the base to the apex, outer apical angle rounded, tarsi narrow, first two joints elongate, third short, not bilobed, fourth as long as the two preceding joints together, claws approximate and subangulate near the base, not toothed. Length 3.0 mm.; 0.12 inch.

Hab.—"Panamins, Vy., K."

A female specimen with the above locality label in the Nat. Mus. collection.

Subtribe *Phytobii*.

This subtribe contains those genera in which the pectoral canal is either entirely absent or, if present, becomes effaced between the anterior coxæ. The beak is short and stout, rarely (*Cvlogaster*, *Phytobius*) more elongate. The eyes are not concealed in repose, and the prothoracic lobes are obsolete (except *Cvlogaster*). The species are all stout, robust insects, rarely elongate (*Pereuthes*).

According to the formation of the beak and the presence or absence of prothoracic lobes, I have arranged the genera under two groups:

- Beak elongate, less robust; scrobes parallel, directed against the eyes; eyes completely concealed in repose by prominent prothoracic lobes; claws bifid. Pl. xiv, fig. 33a.....Group I. *Phytobii spurii*.
- Beak short, stout, scrobes oblique, directed beneath the eyes; eyes entirely or partially free, postocular lobes of prothorax feeble or obsolete. Pl. xiv, fig. 37. Group II. *Phytobii veri*.

Group I. *Phytobii spurii*.

Aside from the characters given above nothing more need be said in the definition of this group, which is represented by the single genus *Cvlogaster*.

CELOGASTER Schoen.

Beak moderately stout, as long as (δ) or a little longer (♀) than the prothorax, cylindrical, curved, somewhat widened at the apex in the female, scrobes parallel, expanded towards the eyes, antennæ slender, inserted two-fifths from the apex (δ) or at the middle (♀), funicle 6-jointed, joints 1-3 elongate, the first stouter, outer three joints short, gradually wider and merging into the elongate elliptical clava. Eyes rounded, convex, with acutely elevated orbital ridges completely concealed in repose; prothorax wider than long, narrowed in front, ocular lobes prominent, anterior margin emarginate,

bicuspid, lateral tubercles large, acute, base bi-emarginate; scutellum small, glabrous. Elytra much and rather suddenly wider at the base than the prothorax, narrowed posteriorly; pygidium large, nearly perpendicular; pectoral canal deep, not extending upon the mesosternum, the latter truncate between the middle coxæ and entering less than one-half into the formation of the middle coxal cavities, side pieces wide, distinctly visible from above; metasternum truncate in front and behind; second abdominal segment shorter than the two following segments together, prolonged on the sides, third narrowed at its extremities, narrowly attaining the lateral margin; anterior coxæ conical, rather widely separated, middle coxæ glabrous, separated about one-half more than the anterior coxæ; posterior coxæ widely separated. Legs moderately long, femora not robust, mutic, tibiæ slender, tarsi moderate, third joint broadly bilobed, fourth joint short, claws armed with a slender tooth, almost as long as the claw itself.

In the formation of the beak, the presence of post-ocular lobes, completely concealing the eyes in repose, formation of the ventral segments and the bifid claws, this genus strongly reverts to *Aulentes* of the subtribe *Celiodes*.

Two species, well defined by structural differences, occurs in our fauna:

Larger, ante-coxal ridges distinct, curved, dorsal channel of prothorax entire, a callous elevation each side at the middle. Pl. xiv, fig. 33b.

zimmermanni.

Smaller, ante-coxal ridges obsolete, prosternum very deeply emarginate, sides of emargination straight; prothorax not uneven, channel interrupted at the middle. Pl. xiv, fig. 34b. **lituratus.**

C. zimmermanni Gyll. Pl. xiv, figs. 33, 33a, 33b.—Broadly oval, piceous; antennæ, tibiæ and tarsi rufous, above variegated with spots of white, or yellowish white scales, underside densely scaly, scales large, oval, white. Beak obscurely subcarinate, opaque, striate and punctured, thinly pubescent, except at the apex, which is glabrous, especially in the female. Head densely punctured; occiput, a spot above each eye and at the middle of the front, of white scales; prothorax not much wider than long, sides nearly straight behind, rounded in front, broadly but not deeply constricted at the apex, broadly impressed in front, apical cusps well marked, triangular, lateral tubercles acute, dorsal channel distinct, entire, gradually becoming wider from the base to the apical margin, an obtuse callosity each side of channel before the middle; between this callosity and the lateral tubercles there is a deep oblique sulcus, surface densely but not coarsely punctured, sides and anterior impression densely, dorsal channel less densely, clothed with large white scale. Elytra one-third wider at the base than the prothorax, wider than long, humeri rounded, sides feebly rounded and narrowed posteriorly,

striae fine, punctures very small, approximate, interspaces flattened, alternately a little more convex and more prominent, rugulose, a cruciform scutellar spot and a curved line each side, of condensed white, or yellowish scales, rest of surface less conspicuously mottled; pygidium densely punctured; prosternum deeply and rather widely emarginate, emargination limited by ante-coxal ridges, which are curved outwardly and more approximate at the apex; underside of body densely punctured and scaly throughout; femora annulate with white scales. Length 3.0 mm.; 0.12 inch.

♂. Last ventral segment with a large, oval, not deeply impressed fovea.

Hab.—New York, Illinois, Washington (Tacoma), South Carolina, Georgia, Pennsylvania.

This would seem to indicate its occurrence over the whole Atlantic slope, except the Northern States. A specimen in my coll. from Tacoma, Wash., has the elytral interspaces equal; the white elytral markings are easily abraded.

C. lituratus n. sp. Pl. xiv, figs. 34, 34a, 34b.—Very similar in appearance, less robust, and a trifle smaller than the preceding species, and with which it also agrees in coloration and the scaly vestiture. It differs as follows: Prothorax fully one-fourth wider than long, sides straight and parallel in their basal half, feebly rounded in front, narrowly and not distinctly constricted at the apex, scarcely impressed before the middle, tubercles and apical cusps smaller, without tuberosity each side of the dorsal channel, the latter almost interrupted at the middle. Elytral interspaces equal, the cruciform scutellar spot differs in that the transverse bar is somewhat oblique; a spot on the seventh interspace represents the oblique lateral line of the preceding species, another spot on the third interspace near the apex; prosternum very deeply and less widely emarginate, sides of the emargination straight, parallel, without ante-coxal ridges; pectus densely clothed with large white scales. Abdomen less densely clothed with piliform scales. Legs as in *zimmermanni*, but more slender. Length 2.75 mm.; 0.11 inch.

Hab.—Detroit, Mich., Illinois.

Two female specimens, Mr. Ulke's and my own collection. This species very closely resembles *Perigaster obscurus* in form and arrangement of the elytral spots, but aside from the difference in the form of rostrum and the scrobes has the anterior cusps of the prothorax less prominent and the last joint of the tarsi less elongate. The cruciform spot on the elytra is absent in Mr. Ulke's specimen and represented by the basal spot in the third interspace only.

Group II. *Phytobii veri*.

The genera and species comprising the *Phytobii veri* present an appearance peculiarly their own. The eyes are more or less prominent and not or only partially concealed in repose. The beak stout and short, rarely slightly elongate (*Phytobius*), scrobes oblique, directed beneath the eyes.

The following genera are indicated :

- Third tarsal joint bilobed, fourth joint shorter than the two preceding joints combined.
- Second ventral segment as long as the following two segments together, third segment narrowed on the sides, not widely attaining the lateral margin; anterior coxæ more widely separated, fully one-half the distance of the middle coxæ.
- Very robust form, lateral tubercles of prothorax very distinct, third tarsal joint broadly bilobed **Perigaster.**
- More elongate, thoracic tubercles almost obsolete, third tarsal joint scarcely bilobed **Parentis.**
- Second ventral segment longer than the two following segments, third not narrowed on the sides, fully attaining the lateral margin; anterior coxæ narrowly separated, scarcely more than one-third the distance of the middle coxæ (except *Rhinoncus*).
- Prosternum without ante-coxal ridges **Pelenomus.**
- Prosternum with ante-coxal ridges.
- Eyes with distinct supra-orbital ridges, anterior coxæ separated one-third the distance of the middle coxæ **Mecopeltus.**
- Eyes without supra-orbital ridges, anterior coxæ separated one-half the distance of the middle coxæ **Rhinoncus.**
- Third joint of tarsi narrow, fourth as long as the preceding joints. Pl. xiv, fig. 40. **Phytobius.**

PERIGASTER gen. nov.

Under this generic name I have separated the two species described by Dr. LeConte under *Cylogaster*, and is thus characterized: Beak stout, shorter than the prothorax, widened towards the apex, scrobes linear, oblique; antennæ inserted one-third (♂), or two-fifths (♀) with 6-jointed funicle, joints 1-3 longer. Eyes large, round, moderately convex, partially concealed in repose, with acutely elevated orbital margin; prothorax strongly narrowed in front, ocular lobes obsolete, apical margin bicuspid, lateral tubercles present, basal margin nearly straight each side; scutel very small. Elytra wider at the base than the prothorax, broadly oval; pygidium nearly perpendicular; prosternum rather short and deeply emarginate in front of the coxæ, not canaliculate, mesosternum short, feebly emarginate in front, truncate behind and forming less than one-half of the middle coxal cavities; metasternum long, entering well between the middle coxæ; second abdominal segment shorter than the two following segments together, the third narrowed on the sides; anterior coxæ conical, prominent, rather widely separated, middle coxæ small, globular, separated twice the distance of the anterior coxæ and less than half the distance of the posterior. Legs slender, femora mutic, scarcely

clavate, tibiæ very slender, not armed at the apex, tarsi with the third joint broadly bilobed, claws simple, divaricate.

Thus defined this genus is readily distinguished from *Calogaster* by the stout and shorter beak, the oblique scrobes, obsolete post-ocular lobes and simple claws. From the following genus it is distinguished by its short, robust form, the distinct prothoracic tubercles and the broadly bilobed third tarsal joint. From the rest of the genera of this subtribe, the present genus is separated by the shorter second abdominal segment and the third segment narrowed on the sides.

The two species are distinguished thus :

Larger, prothorax impressed at the base, elytra not conspicuously mottled.

cretura.

Smaller, prothorax channeled, carinate near the base, elytra tessellate, a conspicuous white spot on the third interspace.....**obscurus.**

P. cretura Herbst.—Broadly oval, brownish black, antennæ and legs reddish brown, thinly clothed above with small, pale, or brownish scales, variable in form, without mottling; beneath, pectus, first and second ventral segments and sides of prothorax, densely clothed with pale brown or fulvous scales, last three abdominal segments less densely scaly. Beak subearinate, punctured, somewhat shining and like the head, thinly pubescent, the latter densely punctured, front broadly impressed; prothorax one-half wider than long, narrowed from the base, rounded on the sides, narrowly and feebly constricted at the apex, dorsal channel obsolete, a fovea-like impression in front of the scutel, lateral tubercles and apical cusps distinct, acute, surface densely and rather finely punctured. Elytra about one-fourth wider at the base than the prothorax, rounded on the sides, not obviously narrowed behind, striae impressed, wide, punctured, punctures concealed by fine, piliform scales, interspaces convex, equal, finely rugose; pygidium rather coarsely punctured, underside densely punctured. Length 2.5-3.0 mm.; 0.10-0.12 inch.

♂. Ventral segments not impressed.

Hab.—Middle, Western and Southern States.

The thighs and tibiæ are infuscate about the middle in some specimens, entirely rufo-testaceous in others.

P. obscurus Lec. Pl. xiv, fig. 36.—Broadly oval, dark piceous, antennæ and legs rufo-testaceous, above thinly squamous, scales on the underside larger, more condensed, especially on the sternal side pieces. Beak very robust, finely striolato-punctate, clothed with fine pubescence. Head rather strongly and closely punctured, frontal fovea distinct, more densely scaly near the base of the rostrum and on the occiput, scales yellowish; prothorax one-half wider than long and about one-third wider at the base than at the apex, feebly rounded on the sides, basal margin straight each side, lateral tubercles acute, apical cusps acute, rather remote, flanks separated from the dorsum by an outwardly curved line or margin, extending from the lateral tubercles to the apical cusps, dorsal channel entire, less distinct at the middle, carinate at the base, disc densely and

coarsely punctured, each puncture bearing a fine, scale-like hair, flanks densely clothed with larger, yellowish scales. Elytra one-third wider at the base than the prothorax, about as long as wide, broadly rounded on the sides and not obviously narrowed behind. basal margin elevated, deeply striate, striæ nearly as wide as the interspaces, closely and coarsely punctured, interspaces convex, somewhat shining, indistinctly mottled with fine white scales, a conspicuous white spot of condensed scales on the third interspace a little more than one-fourth from the base, and another near the apex, a less conspicuous spot on the seventh interspace, about two-fifths from the base; pygidium coarsely punctured, punctures not crowded, underside coarsely punctured, less densely on the abdomen; femora infusate about the middle, annulate with white scales. Length 2.5-2.75 mm.; 0.10-0.11 inch.

♂. Last ventral segment of male not impressed.

Hab.—Florida, Georgia.

Two specimens, Dr. Horn's and Mr. Ulke's coll. The resemblance of this species to *Cteogaster lituratus* has been mentioned under that species; it is much less mottled with pale scales.

PERENTHIS gen. nov.

Beak stout, widened towards the apex, scrobes oblique, at a distance from the eyes; antennæ stout, inserted two-fifths from the apex, funicle 6-jointed, first joint stout, rather short, joints 2-3 a little longer than wide, 4-6 transverse, gradually becoming wider and merging into the rather small, elliptoidal clava. Head wide, eyes large, moderately prominent with slightly elevated orbital ridges; prothorax not much wider than long, without ocular lobes, lateral tubercles very small, almost obsolete, anterior margin straight, without cusps; scutel not visible. Elytra rather suddenly wider than the prothorax, oblong, sides subparallel; pygidium nearly perpendicular; prosternum very short in front of the coxæ, very widely emarginate, without ante-coxal ridges; mesosternum declivous, metasternum longer than the first ventral segment, second ventral segment as long as the two following united, the third segment very little narrowed on the sides; anterior coxæ not very prominent, narrowly separated, middle coxæ about three times as widely separated as the anterior. Legs slender, femora not clavate, mutic, tibiæ parallel, not armed at the apex, tarsi long, third joint feebly bilobed, fourth nearly as long as the two preceding joints, claws simple.

A peculiar insect forms the type of this genus. In form and habitus it rather approaches *Phytobius*, to which it becomes still more closely related by the slender tarsi with the third joint but feebly bilobed. A single species.

P. vestitus n. sp. Pl. xiv, figs. 5, 35a.—Elongate oblong, black, above densely clothed with dark gray and intermingled with pale scales, the vestiture having a faint bluish reflection; scales on the underside uniformly grayish white. Beak and head densely punctulate and thinly clothed with very small, piliform scales, beak with an obscure elevated line; prothorax scarcely one-half wider than long, feebly constricted at the apex, dorsal channel entire, somewhat expanded and more deeply impressed behind the apical constriction, sides well rounded, lateral tubercles obtuse, disc finely and closely punctured, scales not crowded, sides and dorsal channel a little more densely clothed with whitish scales, basal margin straight each side. Elytra nearly two-fifths wider at the base than the prothorax, subparallel on the sides, striae rather wide, not deeply impressed, punctured, punctures concealed by the scales, interspaces wide, a little convex with the scales intact, a distinct post-scutellar spot of white scales. Length 2.5 mm.; 0.10 inch.

♂. Last ventral not impressed.

Hab.—Indiana. A male specimen in Mr. Ulke's coll. Easily recognized by its elongate form, very dense, scaly vestiture, and the very small, lateral thoracic tubercles.

PELENOMUS Thomp.

This genus has for its type *Phytobius camari* Herbst, an insect resembling, in size and general appearance, *P. cavifrons* Lec., but is less stout. Beak robust, more or less widened towards the apex, scrobes oblique, antennal funicle 6-jointed. Eyes rounded, more or less convex and entirely uncovered in repose; prothorax wider than long, narrowed in front, without ocular lobes. Elytra oval, wider at the base than the prothorax; scutel very minute; prosternum very short in front of the coxæ without ante-coxal ridges, mesosternum declivous, truncate posteriorly, side pieces wide, ascending, visible from above; metasternum about as long as the second ventral segment at its middle, side pieces wide; ventral segments 1-2 rather long, the latter fully as long at its middle as the following two segments together, segments 3-4 short, third not narrowed on the sides; anterior coxæ narrowly separated, scarcely one-third the distance of the middle coxæ, not very prominent, middle coxæ subglobose and rather widely separated. Legs slender, femora mutic, tibiae slender, unarmed, posterior of the male with a very small mucro, third joint of tarsi bilobed, claws simple.

The species are distinguished as follows:

Alternate elytral interspaces with a row of tubercles **cavifrons**.
Elytra not tuberculate.

Antennæ more slender, second joint of funicle distinctly longer than the third,
fourth tarsal joint much shorter than joints two and three combined.
Pl. xiv, fig 38. **sulcicollis**.

Antennæ stouter, joints 2-3 of funicle equal, or nearly so.

Fourth tarsal joint longer than the two preceding joints. Elytral interspaces with a row of acute granules. Pl. xiv, fig. 39...**gracilipes**.

Fourth tarsal joint shorter than the two preceding joints.

Front concave, dorsal channel obsolete. Elytra with rows of acute granules.....**asperulus**.

Front not concave, dorsal sulcus distinct. Elytra not asperate.

Beak as long as the head, fourth tarsal joint distinctly shorter than the two preceding joints. Pl. xiv, fig. 37a.....**squamosus**.

Beak shorter than the head, fourth tarsal joint scarcely shorter than the two preceding joints. Pl. xiv, fig. 37b.....**pusillus**.

P. cavifrons Lec. Pl. xiv, fig. 37.—Oval, black, legs rufo-testaceous, above clothed with small, black and white scales, beneath with larger, pale ochreous scales. Beak a little longer than the head, a little widened at the apex, subangulate on the sides densely punctured and scaly; antennæ stout, inserted two-fifths from the apex (♂), or just beyond the middle (♀); joints 2-3 of funicle subequal, a little longer than the outer joints, club subelliptic, acuminate. Head densely punctured and scaly, front deeply concave; prothorax more than one-half wider than long, strongly narrowed in front, base broadly bi-emarginate, sides rounded, apex constricted, broadly and transversely sulcate in its anterior half, anterior margin elevated with two approximate cusps, lateral tubercles rather large, acute, dorsal channel entire, surface densely punctured, sides and transverse sulcus densely clothed with whitish scales. Elytra broadly oval, about one-third wider at the base than the prothorax, broadly rounded on the sides, striæ feebly impressed, closely punctured, each puncture bearing a pale scale, interspaces wide, flattened, except interspaces 3, 5, 7 and 9, which are convex, the former with a row of rather distant tubercles, scales predominantly pale, those of the tubercles blackish, a distinct spot behind the scutellum and another behind the middle on the sutural interspaces of whitish condensed scales, underside densely squamous. Legs slender, thinly clothed with white scales, femora annulate near the apex, tarsi slender, third joint not broadly bilobed, fourth about as long as the two preceding joints together. Length 2.5 mm.; 0.10 inch.

♂. Ventral segments broadly impressed along the middle, the fifth foveate.

♀. Ventral segments feebly impressed.

Hab.—California, Utah.

Easily recognized by the rows of tubercles on the alternate elytral interspaces. A specimen in Mr. Ulke's collection presents some structural differences from the typical form that I deem it proper to refer to it as a distinct variety which eventually may prove to be specific.

Var. *torripes*.—Differs in the following characters: Larger, the anterior transverse sulcus of the prothorax is much shorter, antero-posteriorly, lateral tubercles obtuse and less prominent. Elytra more elongate and more evidently narrowed posteriorly, fifth interspace with a few tubercles, third tarsal joint more broadly bilobed (this is quite evident on comparison with the typical form). Length 3.25 mm.; 0.13 inch.

Hub.—Washington (State).

The whole appearance of the insect is darker, the pale scales being less predominant.

P. sulcicollis Fab. Pl. xiv, fig. 38.—Broadly oval, dark piceous, antennæ and legs rufo-testaceous, above clothed with small, dark brown scales, inconspicuously variegated with spots of pale scales, underside densely clothed with larger, dirty gray scales. Beak scarcely longer than the head, widened towards the apex, rounded on the sides, densely punctured and scaly; antennæ less stout, inserted about two-fifths from the apex (♂), or just before the middle (♀), first joint of funicle stout and rather long, joints 2 3 distinctly elongated, the former longer than the latter, outer joints short, subturbinate, club relatively larger than in *cavifrons* and not acuminate. Head not wide, obscurely channeled on the vertex, front concave, densely scaly; prothorax almost twice as wide at the base than long, strongly narrowed in front, sides nearly straight behind, base emarginate each side, apical margin elevated with two large and rather distant cusps, between these there is an emargination, lateral tubercles acute, prominent, dorsal channel distinct, entire, becoming gradually wider from the base and widening into a triangular fovea in front, the lateral margins of which extend to the anterior cusps, disc finely and closely punctured, sides densely clothed with pale scales, some scattered pale scales along the sulcus. Elytra broadly oval, less than one-third wider at the base than the prothorax, rounded on the sides, striæ not deeply impressed, moderately wide, punctured, punctures distinct, transverse and rather distant, interspaces moderately wide, slightly convex, with a few very minute, but acute granules; a distinct post-scutellar spot of white or pale yellowish scales, surface tessellate with subquadrate spots of larger, whitish scales; pygidium small, rather coarsely punctured, underside not very closely punctured, punctures small, femora a little stouter than in *cavifrons*, densely scaly, not annulate, tibiæ slender, tarsi moderately stout, third joint broadly bilobed, fourth shorter than the two preceding joints. Length 2.3 mm.; 0.09 inch.

♂. Ventral segments 3 5 flattened, or slightly concave along the middle.

♀. Apex of last ventral segment with a glabrous oval space.

Hub.—Pennsylvania, Montana, Illinois, Iowa; Detroit, Mich., (Lake Superior to Georgia, LeConte).

The greater length of the second and third joints of the antennal funicle, the absence of evident elytral tubercles or granules, and the rather short fourth tarsal joint, distinguishes this species from all others of this genus.

p. gracilipes n. sp. Pl. xiv, fig. 39.—Oval, piceous, legs rufo-piceous, clothed above and beneath with grayish white scales, smaller and less crowded above. Beak distinctly longer than the head, a little wider towards the apex, the latter subearinate, rounded on the sides, finely punctured and squamous; antennæ stout, inserted two-fifths from the apex (♀), first joint of funicle moderately stout, the second and third joints very little longer than the outer joints, these gradually wider and merging into the moderately large elliptoidal clava. Head separated from the beak by a curved impression, front deeply concave, orbital margin acutely elevated, densely clothed with scales; prothorax more

than one-half wider than long, rounded on the sides, constricted at the apex, apical cusps prominent, acute and not closely approximate, an acute carina extending from the summit of each cusp and converging towards the median line, enclosing a triangular fovea, dorsal sulcus ill-defined, obsolete near the base, lateral tubercles very acute, a trifle smaller than the anterior cusps, surface evenly punctured, punctures nearly concealed by the scales, which are a trifle paler and more crowded on the sides. Elytra two-fifths wider at the base than the prothorax, oval, rounded on the sides, striae not deeply impressed, punctured, each puncture bearing a pale scale, interspaces flattened on the disc, outer ones slightly convex, each from the fifth to the tenth with a row of distinct, small, but acute granules, a few scattered and less distinct granules on the inner interspaces, a spot behind the scutellum of white scales; pygidium moderately large, punctured and scaly. Legs as in the preceding species, not very densely scaly, tarsi rather slender, joints 2-3 rather short, the third not broadly bilobed, the fourth joint longer than the two preceding joints, claws slender, diverging. Length 2.3 mm.; 0.09 inch.

♀. Last ventral segment with a small glabrous place.

Hab.—West Pl., Neb.; Garland, Col.

Two female specimens in the Nat. Mus. coll. The Colorado specimen differs in several respects from the Nebraska specimen, which has served as the type for the above description, and with a larger series of specimens may prove to be distinct. It has the front scarcely concave, the upper margin of the eyes being hardly raised above the level of the front; the vestiture of the upper surface consists of pale and brown scales in nearly equal proportion.

P. asperulus n. sp.—Oval, dark piceous, legs and antennae rufo-piceous, clothed above with pale brown pubescence, intermixed with pale, elongate scales, underside not very densely clothed with moderately large, dirty gray scales. Beak a little longer than the head, widened towards the apex, feebly curved, subangulate on the sides, densely punctured, pubescent, scrobes commence about one-fifth from the apex; antennae inserted two-fifths from the apex, first joint of funicle distinctly longer than the second, this equal to the third, outer joints scarcely wider, club ovoid, rather large. Head closely and rather coarsely punctured, pubescent, deeply concave between the eyes, the latter convex, prominent, their upper margin reaching considerably above the front; prothorax more than one-half wider than long and about one-fourth wider at the base than at the apex, sides broadly rounded, constricted at the apex, base broadly emarginate each side, lateral tubercles rather small, acute, apical cusps a trifle larger and less acute, rather widely separated, dorsal sulcus obsolete, an indistinct feebly impressed, median line, surface densely and somewhat coarsely punctured, sides densely clothed with whitish scales. Elytra oval, a trifle longer than wide, two-fifths and rather suddenly wider at the base than the prothorax, broadly rounded on the sides, striae distinct and deeply impressed, punctured, punctures approximate, interspaces flat, finely rugose, each with a row of very small acute granules, more distinct on the outer interspaces, the white scales form indistinct spots and bands; pygidium somewhat compressed laterally and produced toward the apex, densely punctured and pubescent, underside of thorax rather coarsely and densely

punctured, ventral segments more finely punctured; femora feebly clavate, infusate about the middle, tibiae slender, a little wider towards the apex, the anterior somewhat curved, middle and posterior nearly straight, tarsi slender, third joint not broadly bilobed, the fourth shorter than the two preceding joints combined, claws simple, slightly divergent. Length 2.0 mm.; 0.08 inch.

♂. Second ventral segment with a round and rather deep fovea, bordered on its anterior circumference by an elevated margin. Last ventral with an ill-defined, triangular and somewhat spongy space.

Hab.—Detroit, Mich.

A single specimen in Dr. Horn's coll. The fovea on the second ventral is very remarkable. Differs from the preceding species by its smaller size, much smaller elytral asperities and shorter fourth tarsal joint; from the next species, with which it agrees in size, by the absence of the prothoracic sulcus and the presence of the elytral asperities.

P. squamosus Lec. Pl. xiv, fig. 37a.—Oval, pitchy black, antennae and legs rufo-piceous, above densely clothed with small, dark gray scales, having a feeble brassy lustre, indistinctly mottled with larger, grayish white scales, underside not densely clothed with grayish white scales. Beak stout, cylindrical, fully as long as the head and separated from the latter by an ill-defined, curved line in front of the eyes, very little widened towards the apex, densely and rather finely punctured, squamose; antennae moderate, inserted two-fifths from the apex (♂), second joint of funicle a trifle shorter than the first and distinctly longer than the third, outer joints short, club rather large, elongate. Eyes moderately convex. Head densely punctured, squamose, scarcely concave between the eyes, a median vitta and an ill-defined spot before each eye of white scales; prothorax nearly twice as wide as long, one-third wider at the base than at the apex, feebly rounded on the sides and transversely impressed behind the anterior margin, base very feebly emarginate each side, lateral tubercles acute, anterior margin with two very acute, distant cusps, a little smaller than the lateral tubercles and with the margin between them emarginate, dorsal channel wide, distinct, ending into a triangular fossa anteriorly; surface densely and finely punctured, sides and dorsal sulcus clothed with white scales; scutellum very small, scarcely visible. Elytra one-third wider at the base than the prothorax, a little longer than wide, moderately narrowed behind, humeri rather prominent, striae not deeply impressed, punctures small, rather distant, interspaces flattened, finely punctured, without asperities, the pale scales are condensed in transverse fascias and along the suture, a short line behind the scutellum of dark gray, velvety scales; pygidium finely and densely punctured, underside not coarsely punctured. Legs and tarsi slender, third joint of the latter not broadly bilobed, last joint shorter than the two preceding joints. Length 2.0 mm.; 0.08 inch.

♂. Last ventral segment with a large, quadrilateral fovea, fully occupying the middle third of the segment and limited each side by a ridge.

Hab.—Coeur d'Alene, Idaho (New York, Michigan, British Columbia, LeConte).

The single specimen in my collection and which has served as the type for the above description, was collected by Mr. Wickham at

the above-named locality. It agrees well with the description as given by Dr. LeConte, differing only in that the author describes the species as densely scaly above, which is not the case in my specimen. In appearance it closely resembles the next; it is, however, easily distinguished by the longer beak, the longer fourth tarsal joint and the sexual characters of the male.

P. pusillus n. sp. Pl. xiv, fig. 37b.—Of the same size as *squamosus*, with which it agrees, except in the following points: Beak very stout, shorter than the head. Eyes less convex, the scales on the upper surface are brownish with a distinct brassy lustre and more conspicuously mottled with larger white scales; scales of underside of prothorax and mesosternal side pieces ochreous. Legs rufous, fourth tarsal joint distinctly longer, nearly equal to the two preceding joints.

♂. Last ventral with a small longitudinal fovea.

Hab.—Tampa, Fla.

The single specimen before me is a male in Dr. Horn's coll. and bears the label, "*squamosus* Lec.;" however, the description tallies less with this than the preceding species. The more northern habitat of the former would also in a measure lend support to this view; still, should a comparison with the type prove my conclusions to be erroneous, the specific name adopted for the present species may be applied to the one which I consider as *squamosus* Lec.

MECOPELTUS gen. nov.

This genus differs from *Pelenomus* only in the presence of distinct ante-coxal ridges, forming a prosternal canal, more or less distinct for the reception of the rostrum in repose, the latter is a little less robust; antennal funicle 6-jointed, club large, the first joint forming fully one-half its mass; orbital margin acutely elevated; second abdominal segment longer than the two following united, the third not narrowed on the sides; prosternum longer in front of the coxæ; the scutellum is minute, but visible in all. In general appearance the species do not differ from those of the preceding genus and may be distinguished as follows:

Antennæ more slender, second joint of funicle distinctly elongate, elytra rounded on the sides.

Front concave, scales without lustre, dull **fuliginosus.**

Front not concave, scales with a brassy lustre **scandens.**

Antennæ stouter, second joint of funicle not distinctly elongate, scarcely longer than wide.

Elytra without a pale, sutural spot.

Elytral interspaces with a row of acute granules.

Subdepressed, elytra trapezoidal, scales without lustre.

obscurifasciatus.

Convex, elytra rounded on the sides, scales with brassy lustre.

aneosquamosus.

Elytra not granulate **congenialis.**

Elytra with a pale, sutural spot **scoliosus.**

M. fuliginosus n. sp.—Oval, pitchy black, antennæ and legs rufo-piceous, above thinly clothed with very small grayish scales, not concealing the derm, inconspicuously mottled with somewhat larger, whitish scales and some pale pubescence, underside more densely clothed with sordid gray scales. Beak longer than the head and separated from it by an impressed, not very distinct, curved line, gradually widened from base to apex, rounded on the sides, densely punctured, each puncture bearing a fine, piliform scale; antennæ rather slender, inserted scarcely one-third (♂), or nearly two-fifths (♀), from the apex, first two joints of funicle elongate, first joint stout, second slender, longer than the third joint which is a little longer than the following joints. Eyes round, convex, orbital margin acutely elevated. Head densely punctured, front concave between the eyes; prothorax about one-half wider than long and one-third wider at the base than at the apex, rounded on the sides before the middle, broadly but not strongly constricted at the apex, lateral tubercles large, acute, anterior cusps rather large and also acute, somewhat remote and connected with the former by a nearly straight marginal line, an oblique impression in front of each lateral tubercle, dorsal channel entire, expanding anteriorly into a triangular fossa having in its centre a deep fovea, surface densely and rather finely punctured, sides densely clothed with rather large, dirty yellowish scales. Elytra oval, one-third wider at the base than the prothorax, humeri somewhat prominent, sides broadly rounded to the apex, striæ rather wide, not deeply impressed, punctures transverse, approximate, interspaces feebly convex, transversely rugose, outer interspaces with a row of very small, acute granules, each bearing a short recurved seta; pygidium finely punctured; ante-coxal ridges acute, underside densely punctured. Legs slender, femora and tibiæ infuscate about the middle, tarsi slender, third joint scarcely twice the width of the preceding joint, the fourth projecting more than the length of the third, claws simple, rather small, divaricate. Length 2.75-3.0 mm.; 0.11-0.12 inch.

♂. Last ventral not impressed, middle tibiæ distinctly unguiculate, posterior with a minute mucro at the apex.

Hab.—Canada, Massachusetts, Pennsylvania, Oregon, Nevada, Texas, New York.

Resembles *Pelenomus sulcicollis*, with which it has been confounded in collections, but is larger and of more sombre appearance. The presence of ante-coxal ridges is sufficient to distinguish the two species.

M. scandens n. sp.—Oval elliptic, black, antennæ and legs ferruginous, above thinly clothed with very small, pale brown scales, inconspicuously mottled with small spots of white scales and intermixed with a fine pubescence having a

brassy lustre, underside more densely clothed with grayish white scales. Beak stout, a trifle shorter than the head and separated from it by a curved, impressed line, distinctly widened towards the apex, rounded on the sides, densely punctured except a space just before the apex, each puncture bearing a small, brassy scale; antennæ slender, first joint of funicle stout, second and third elongate, slender, the third a little shorter than the second, outer joints short. Eyes moderately convex. Head densely punctured, front not concave between the eyes, more densely scaly on the sides behind the eyes; prothorax more than one-half wider than long, less than one-third wider at the base than at the apex, which is feebly constricted, sides broadly rounded, lateral tubercles moderately large, acute, apical cusps very little smaller, distant and very acute, apex distinctly emarginate between the two cusps, dorsal sulcus distinct, broad, widening anteriorly into a well marked, triangular fossa, a transverse impression in front of each lateral tubercle, which extends towards and attains the median sulcus, surface closely punctured, punctures rather large, each bearing a small scale, sides densely clothed with large, yellowish white scales, base broadly emarginate each side; scutellum quite distinct, glabrous. Elytra longer than wide, about one-third wider at the base than the prothorax, humeral angle rather prominent, sides broadly rounded and gradually narrowed towards the apex, striae not deeply impressed, distinctly punctured, punctures transverse, closely set, interspaces feebly convex, finely punctured and without asperities, the sutural interspace clothed with grayish white, velvety scales interrupted behind the scutellum by a darker spot; pygidium densely punctured; underside, and especially the sterna, very closely and somewhat coarsely punctured. Legs and tarsi slender, the third tarsal joint scarcely one-half wider than the preceding one, the fourth about as long as the two preceding joints, claws feebly divergent. Length 2.25-0.09 inch.

♀. Last ventral segment with a very small, glabrous space at the apex.

Hab.—"Cambri" (?).

A single female specimen in Dr. Horn's coll. The ante-coxal ridges are less marked than in the preceding species, resembling in this respect *scoliosus*. It very closely resembles *aneosquamosus*, from which it is distinguished by its less robust form, the longer second and third joints of the antennal funicle and the velvety line on the sutural interspace.

M. obscurefasciatus n. sp.—Subtrapezoidal, moderately stout, somewhat depressed, pitchy black, tibiae and tarsi rufo-piceous, above not densely clothed with small, grayish brown scales and variegated on the elytra with ill-defined, transverse fasciae of white scales, the scales intermixed with a short, coarse pubescence, underside clothed with dirty gray scales. Beak a little longer than the head and separated from it by a curved, impressed line, curved, sub-cylindrical, somewhat flattened above and widened towards the tip, closely and rather coarsely punctured, thinly squamous; antennæ piceous, inserted less than one-third (♂) or nearly two-fifths (♀) from the apex, rather stout, joints 2-3 of funicle not elongate, scarcely longer than wide, very little longer than the outer joints. Eyes convex, supra-orbital margin acutely elevated. Head densely and rather coarsely punctured, concave between the eyes; prothorax about one-half wider than long, one-third wider at the base than at the apex, the latter

somewhat constricted, sides subparallel behind the middle, rounded before, lateral tubercles prominent, acute, anterior cusps distinct, acute and rather distant, dorsal channel ill-defined, entire, expanding anteriorly into a triangular, not deeply impressed fossa, surface densely punctured, punctures rather large, each bearing a small scale, sides densely clothed with whitish scales; scutel very small, scarcely visible. Elytra trapezoidal, two-fifths wider at the base than the prothorax, humeri prominent, sides nearly straight and narrowed posteriorly for three-fourths their length, rather suddenly rounded to the apex, striae rather wide, more deeply impressed near the base, punctured, punctures small and more or less concealed by the scales, alternate interspaces a trifle more convex, punctured, outer interspaces with a row of distant, very small, acute granules, each bearing a short, recurved seta; pygidium densely punctured, underside as in the preceding species; ante-coxal ridges distinct. Legs slender, third tarsal joint nearly twice the width of the second, fourth shorter than the two preceding joints together, claws divergent. Length 2.75 mm.; 0.11 inch.

♂. First and second ventral segments impressed, tibiae not unguiculate.

Hab.—Nevada.

Four specimens in Dr. Horn's coll. are before me. Its nearest ally is *aneosquamosus*.

M. aneosquamosus n. sp.—Oval, convex, dark piceous, antennae and legs ferruginous, above not dense clothed with small scales having a brassy lustre indistinctly mottled with pale spots. Beak, antennae and head as in the preceding species; prothorax one-half wider than long, nearly straight on the sides behind, rather suddenly narrowed in front and broadly constricted at the apex, constriction not extending upon the disc, lateral tubercles prominent, acute, anterior cusps about as large, rather distant, dorsal channel broad, expanding anteriorly into a triangular fossa, an oblique impression in front of the lateral tubercles, surface densely punctured, sides densely clothed with yellowish gray scales; scutel very small. Elytra oval, convex, two-fifths wider at the base than the prothorax, humeri prominent, sides rounded, striae not deeply impressed, punctures small, not closely approximate, interspaces feebly convex, alternate ones a trifle more so, outer interspaces with a row of very small, acute granules, each bearing a short recurved seta; pygidium closely and finely punctured; ante-coxal ridges distinct, underside densely punctured and scaly. Legs and tarsi as in the preceding. Length 2.25-2.75 mm.; 0.09-0.11 inch.

♂. Second ventral segment with a small, longitudinal fovea, surrounded anteriorly by a patch of large yellow scales.

Hab.—Oregon, Texas. Dr. Horn's and Nat. Mus. collections.

Three males and six females are before me. This species closely resembles *obscurifasciatus* in appearance, but is more convex, the scales have a decided brassy lustre, the elytra rounded on the sides, legs entirely ferruginous, femora dusky at the base, and lastly the sexual differences of the males. The single specimen from Texas is a little longer than the Oregon specimens but does not differ otherwise. Also closely related to the next species.

M. congenialis n. sp.—Differs from the last species as follows: Less robust; antennæ inserted just before the middle (♂); orbital margin only slightly elevated, front not concave between the eyes; prothorax more than one-half wider than long, anterior cusps much smaller, very acute and a little more remote. Elytra one-third wider at the base than the prothorax, somewhat shining, very thinly clothed with very small scales without metallic lustre, conspicuously mottled with spots of white scales, a short scutellar line of dark, velvety scales, striæ well impressed, distinctly and closely punctured, interspaces convex, punctulate, without acute granules: underside of body more densely clothed with grayish white scales, femora more densely scaly, obscurely annulate. Length 2.25 mm.; 0.09 inch.

♂ . Apical half of last ventral segment with a well defined, transversely oval, glabrous fovea.

Hab.—Oregon.

A unique specimen in Nat. Mus. coll. Might readily be confounded with *aneosquamosus*, with which, indeed, I had confounded it, but for the difference in the sexual characters of the male. The elytra are more shining, not densely scaly and distinctly mottled with spots of white scales.

M. scoliatus n. sp.—Oval elliptic, convex, black, antennæ and legs rufous, infusate; above rather densely clothed with dirty gray scales, variable in size, underside clothed with small oval scales, not at all crowded except on the mesosternum and the last ventral segment. Beak a little longer than the head, feebly curved, a little wider towards the apex, separated from the head by an impression, densely punctured, subearinate in its apical half. Head densely punctured, feebly concave between the eyes, the latter slightly convex; antennæ stout, inserted immediately before the middle (♂), first joint of funicle robust, joints 2-3 not elongate; prothorax nearly one-half wider than long, one-third wider at the base than at the apex, widest at the base, sides straight and slightly convergent for three-fifths their length, rather suddenly rounded in front and feebly constricted at the apex, lateral tubercles large, very acute, anterior cusps nearly as large as the tubercles, not widely separated, dorsal sulcus broad, ill-defined posteriorly, widening and more sharply defined in front by ridges extending to the summit of the anterior cusps, disc closely and rather coarsely punctured, sides densely squamose; scutel very minute. Elytra oval, one-third wider at the base than the prothorax, rounded on the sides, striæ rather wide, well impressed, closely and coarsely punctured, more or less concealed by the scales, interspaces rather convex, finely rugose, outer interspaces with a row of small, setiferous granules, a common sutural spot of pale scales near the base; pygidium densely and finely punctured; ante-coxal ridges not sharply defined. Legs slender, femora infusate about the middle, tarsi slender, third joint scarcely one-half wider than the second, fourth joint nearly as long as the two preceding joints together, claws divergent. Length 2.0 mm.; 0.08 inch.

♂ . Cannot discover any sexual characters on the ventral surface.

Hab.—Wyoming.

Two male specimens in Dr. Horn's coll. At once recognized by the conspicuous, pale sutural spot.

RHINONCUS Sch.

Beak stout, widened towards the apex, scrobes oblique, deep; antennæ with 7-jointed funicle, clava elliptic, acuminate. Eyes large, rounded, more or less convex, without distinct supra-orbital ridges; scutel not visible; prosternum long in front of the coxæ, deeply emarginate, with distinct ante-coxal ridges; mesosternum oblique, metasternum a little shorter than the first ventral segment; second ventral segment as long, or longer than the two following segments together, the third segment not narrowed on the sides, fully attaining the lateral margin; anterior coxæ conical, prominent and rather widely separated, middle coxæ globular, separated about twice the distance of the anterior coxæ, their cavities formed equally by the meso- and metasternum. Legs rather slender, third tarsal joint bilobed, claws armed with a long tooth.

The species of this genus, although varying from a broadly oval to an elongate form, present a habitus peculiarly their own. The expression "without distinct orbital ridges," as used in the analytical table and again in the above description of the genus requires some explanation, inasmuch as such a ridge, ill-defined as it is, exists in most of the species examined by me. Dr. LeConte's statement, "no trace of supra-orbital ridge," is therefore erroneous. In the European species, *R. topivius*, this ridge is quite prominent and the front concave, as much so as in certain *Pelenomi*; it is entirely absent only in *R. longulus* Lec. and its European congener, *R. perpendicularis*. In all the anterior coxæ are much more widely separated than in *Pelenomus* or *Mecopeltus*. In all the species there exists a conspicuous scutellar spot of white or pale scales, and the anterior thoracic margin is entire. The apical armature of the tibiæ in the male differs in each of the three species.

I have no additions to make to the three species heretofore known and which may be distinguished as follows:

Eyes as widely separated above as the width of the beak, the latter longer than the head: form stout.

Larger, elytra not tuberculate.....**occidentalis.**

Smaller, elytra tuberculate.....**pyrrhopus.**

Eyes encroaching upon the front, beak shorter than the head; form oblong.

longulus.

R. occidentalis n. sp.—Oval, robust, black, antennæ and legs piceous; above thinly clothed with coarse grayish pubescence; beneath densely clothed with dirty gray scales. Beak a little longer than the head and separated from it by a curved impression in front of the eyes, widened at its apical third, distinctly

carinate and closely and coarsely punctured, except near the apex; antennæ slender, inserted (♂ and ♀) one-third from the apex, scape impinging against the eye, first joint of funicle moderately stout, second long and slender, fully as long, or longer than the first, joints 3-4 shorter, outer three joints transverse and slightly wider. Eyes feebly convex with slightly raised supra-orbital ridges, separated nearly as widely as the width of the beak. Head densely and coarsely punctured, front flattened; prothorax one-half wider than long, rounded on the sides and feebly constricted at the apex, about one-fourth wider at the base than at the tip; lateral tubercles very small, obtuse, dorsal sulcus entire, more deeply impressed behind, a transverse, ill-defined impression each side behind the middle, surface coarsely punctured, punctures crowded on the sides. Elytra oval, about one-fourth wider at the base than the prothorax, sides rounded, striæ wide, deep, closely and coarsely punctured, interspaces subconvex, alternately a little wider, rugose, the wider interspaces with pale, piliform scales, scutellar spot very conspicuous, cardiform; pygidium like the underside, rather coarsely and closely punctured; femora subelavate, tibiæ widened at the apex, third tarsal joint broadly bilobed, fourth long, projecting the length of the preceding joint, claws armed with a strong tooth one-half the length of the claw. Length 3.5-4.0 mm.; 0.14-0.16 inch.

♂. Fifth ventral segment broadly emarginate, shorter than the two preceding segments together, anterior tibiæ unguiculate at the apex.

♀. Fifth ventral rounded, longer than the two preceding segments.

Hab.—Canada, Kansas, Iowa, Indiana (Pennsylvania, Lake Superior, LeConte).

This species is known in our lists and collections as *pericarpus*, and it is not without hesitancy that I propose a new name for a fairly well-known species. In size and general appearance it agrees well with the European species, but differs from it in the following points: 1. beak carinate; this is constant, though varying in degree in all the numerous specimens before me, while in eight European specimens of *pericarpus* from different localities a slight indication of a carina exists only in two specimens; 2. the curved impression at the base of the rostrum is not noticeable in *pericarpus*; 3. the fourth tarsal joint projecting about the length of the third joint, whereas in *pericarpus* the third is relatively shorter, the fourth projects distinctly more than the length of the former.

R. pyrrhopus Boh.—Suboval, picuous, antennæ and legs paler, clothed above with a coarse brownish pubescence, variegated in varying proportion with whitish piliform scales, underside clothed with whitish scales which are more dense on the sterna and their side pieces. Beak longer than the head, cylindrical, feebly curved, carinate, densely punctured and scaly in its basal half, finely punctured, shining and widened towards the apex, first joint of funicle stout, second elongate, longer than the third, outer joints a little wider. Eyes slightly convex, with feeble supra-orbital ridges, separated above nearly the width of the beak. Head densely punctured, squamose, slightly concave between the eyes; prothorax less than one-half wider than long, narrowed in front, feebly rounded on the

sides, broadly and distinctly constricted at the apex, lateral tubercles small, subacute; dorsal channel entire or nearly so, less distinct anteriorly, surface coarsely punctured, less so in front. Elytra oval, less than one-third wider at the base than the prothorax, broadly rounded on the sides, striae rather wide, well impressed, punctures small and rather distant, interspaces convex, rugose, each with a row of small tubercles or granules, behind the distinct scutellar spot is a dark velvety line; pygidium densely punctured, coarsely pubescent; femora subclavate, tibiae slightly curved, especially the anterior pair, tarsi slender, third joint broadly bilobed, fourth as long as the two preceding joints, claws with a long basal tooth. Length 2.5-2.75 mm.; 0.10-0.11 inch.

♂. Last ventral with a small glabrous space at the apex; middle and posterior tibiae unguiculate at the apex.

Hab.—Eastern, Western and Southern States.

Our most common species. The Eastern specimens are generally smaller and less conspicuously mottled than the Western.

R. longulus Lec.—Oblong, elliptic, black, antennae and tarsi paler, above thinly clothed with a very short, fine pubescence, interspersed with isolated, elongate white scales; scales on the underside white, not dense, except on the mesosternum and between the anterior coxae. Beak very stout, shorter than the head, widened at the apex, coarsely punctured and scaly near the base; antennae rather stout, inserted just before the middle, scape testaceous, funicle and clava darker, first joint of funicle robust, second not elongate, shorter than the first and a little longer than the third, club oval. Eyes round, feebly convex and encroaching upon the front, without supra-orbital ridges, separated above about one-half the width of the rostrum. Head convex, densely punctured; prothorax about as long as wide, scarcely one-fourth wider at the base than at the apex, broadly rounded on the sides and feebly constricted at the apex, lateral tubercles absent, dorsal channel extending to about the middle, surface densely punctured, especially on the sides, the latter densely clothed with large, cream-colored scales and enclosing an oval, glabrous space, dorsal channel squamose. Elytra elongate, one-third wider at the base than the prothorax, humeri rounded, sides nearly straight for one-half their length, then gradually rounded to the apex, striae deep, distinctly punctured, punctures not closely approximate, interspaces coarsely rugose, scutellar spot very conspicuous, another less distinct sutural spot on the declivity and some lines of white scales; pygidium densely and finely punctured; prosternum broadly and less deeply emarginate. Legs slender, femora not clavate, tibiae scarcely wider at the apex, tarsi slender, third joint broadly bilobed, fourth shorter than the two preceding joints, claws with a long tooth. Length 2.5-3.0 mm.; 0.10-0.12 inch.

♂. Last ventral slightly glabrous at the apex, middle tibiae unguiculate at the apex.

Hab.—Pennsylvania (Allegheny County, Dr. Hamilton), Southern and Western States.

Easily recognized by its elongate form; structurally and in appearance it agrees with the European *R. perpendicularis* Reich., but is much larger. Two specimens in Mr. Ulke's coll. are ferruginous, due no doubt to immaturity.

PHYTOBIUS Sch.

This genus is at once distinguished from the other genera of this subtribe by the very slender tarsi, the fourth joint equaling in length the three preceding joints. The rostrum is less stout, longer than the head, scrobes oblique, straight, at some distance from the eyes; antennæ with 6-jointed funicle, joints 1-3 elongate, club variable. Eyes rather small, round, convex and entirely exposed; base of prothorax produced into an acute, triangular process at the middle; scutellum scarcely visible. Elytra wider at the base than the prothorax, distinctly narrowed posteriorly; pygidium large, prosternum very short in front of the coxæ, broadly emarginate, without ante-coxal ridges, mesosternum broad, truncate behind, forming one-half of the middle coxal cavities, side pieces wide, ascending; metasternum short, side pieces wide; first ventral segment a little longer than the second, segments 3-4 short, third not narrowed on the sides; anterior coxæ conical, prominent, subcontiguous, separated by a very thin lamina of the prosternum, middle coxæ subglobose, rather widely separated, posterior coxæ small, distant from the lateral margin and but a little more widely separated than the middle coxæ. Legs long and slender, femora mutic, tibiæ not armed at the apex, tarsi as described above, claws simple.

The two species thus far known to occur within our faunal limits present structural differences of sufficient importance to warrant the establishment of two subgenera, as follows:

- Mesosternal side pieces wider, epimera ascending between the prothorax and the elytra, freely visible from above.....**Phytobius**.
 Mesosternal side pieces narrower, epimera not ascending between prothorax and the elytra, not visible from above.....**Euhrychiopsis**.

Subgenus **Phytobius**.

Prothorax much wider than long, narrowed anteriorly; mesosternal side pieces freely visible from above; the derm is covered with a dense layer of scales, which, on the upper surface, overlap each other, forming a sort of water-proof covering similar to that seen in certain genera of the Eirrhiniini. The European *P. velatus* Beck, the type of the genus, belongs here.

One species:

Ph. griseomicans n. sp. Pl. xiv, fig. 40.—Oval, black, antennæ and legs rufous-testaceous, above densely clothed with grayish, slate-colored scales, having a peculiar velvety appearance, beneath with pale ochreous, rounded scales. Beak as long as the prothorax, rather slender, a little widened at the apex, finely punctate.

tured and squamose towards the base; antennæ slender, inserted two-fifths from the apex (♂), the scape not attaining the eye, first joint of funicle longer than the following joints. Eyes with orbital ridges. Head finely punctured, occipital carina continued to the front, the latter concave between the eyes; prothorax more than one-half wider than long, widest a little before the basal angles, sides feebly and somewhat irregularly rounded, gradually narrowed for three-fourths their length then suddenly narrowed to and somewhat constricted at the apex; lateral tubercles small, acute, dorsal channel entire, surface uneven, anterior margin with two remote, very small and obtuse cusps, disc densely punctured, punctures concealed by the scales, sides densely clothed with ochreous scales. Elytra less than two-fifths wider at the base than the prothorax, humeri rounded, prominent, sides nearly straight for three-fifths their length, then rounded to the apex, striae wide, impressed, punctures concealed by the scales, interspaces convex, scutellar region clothed with pale, whitish or yellowish scales; pygidium densely punctured, squamous; underside of body densely punctured; femora at tip and tarsi dusky. Length 3.0 mm.; 0.12 inch.

♂. Last ventral segment with a narrow glabrous space at the apex.

Hab.—Dakota.

Two males, one in Dr. Horn's (without locality label), the other in Mr. Ulke's coll., are before me. Very closely related, if not identical with the European *P. velatus*, a male specimen of which, in Dr. Horn's collection, is also before me, and from which it appears to differ only in the more elongate beak and the more slender antennæ; the scaly vestiture on the upper surface also differs somewhat. I have retained the name of this species by which it is known in our collections and in the Third Supplement to the List of N. A. Coleoptera by Mr. Samuel Henshaw. As I had not seen any description of this species I wrote to Mr. E. A. Schwarz, the reputed author, for information, and to kindly give me the name, etc., of the publication containing the description of this and two other species. This inquiry Mr. Schwarz has not seen fit to answer. I also wrote to several other gentlemen who might be in a position to give me the desired information, but with negative results. Under these circumstances no other course is left for me but to describe the species as new.

Subgenus *Euhrychiopsis*.

Prothorax very little wider than long, scarcely narrowed at the apex; mesothoracic side pieces not visible from above; scales on the upper side not imbricate and forming a water-proof coating. Represented by

Ph. lecontei n. sp.—Elongate, black, antennæ and legs rufo-testaceous, scales on the upper surface of a yellowish green, beneath of a yellowish gray color. Beak moderately stout, a little longer than the head, widened at the apex.

subcarinate, punctured and scaly towards the base, antennæ inserted about the middle, second joint of funicle elongate, longer than the first, clava rather small, elongate elliptic, acuminate. Eyes without supra-orbital ridges. Head densely scaly, not concave between the eyes, occipital carina extending upon the front; prothorax a trifle wider at the base than long, widest about the middle, lateral margin subangulate, tubercles very small, scarcely discernible, dorsal channel wide, entire, anterior margin with two distant, extremely small cusps; punctures, where visible, rather coarse, sides and dorsal channel densely scaly. Elytra two-fifths and rather suddenly wider at the base than the prothorax, humeri prominent, sides gradually narrowed from the shoulders; striae deep, wide, distinctly punctured, interspaces convex, rugose, sides and sutural interspace densely scaly, striae of the disc each with a row of scales; femora densely squamous, apex and end of fourth tarsal joint dusky. Length 2.25-2.5 mm.; 0.09-0.10 inch.

♂. The glabrous space at the apex of the last ventral segment is almost obsolete.

Hab.—Michigan (Detroit).

The remarks under the preceding species also apply here. Dr. LeConte considered this as identical with the European *Ph. velatus* Beck. Mr. Schwarz is credited with calling this species *lecontei*.

Bibliography and Synonymy.

MONONYCHUS Germ.

1. *M. vulpeculus* Fab., Syst. El. ii, 150; Oliv., Ent. v, No. 83, 129, pl. 427; Boh., Sch. Curc. iv, 309; Say, Curc. 20, ed. Lec. i, 286.

CRAPONIUS Lec.

1. *C. inæqualis* Say, Curc. 20, ed. Lec. i, 286 (*Centorhynchus*); Lec., Proc. Amer. Philos. Soc. xv, 269.

CNEMOGONUS Lec.

1. *C. lecontei* n. sp.

ACANTHOSCELIS gen. nov.

1. *A. californicus* n. sp.
2. *A. frontalis* n. sp.
3. *A. griseus* n. sp.
4. *A. ilex* n. sp.
5. *A. curtus* Say, Curc. 20, ed. Lec. i, 298 (*Centorhynchus*); Gyll., Sch. Curc. iv, 287.
6. *A. acephalus* Say, Jour. Ac. Nat. Sci. Phila. iii, 309; ed. Lec. i, 173; Germ., Sch. Curc. iv, 289; *sabulirostris* Gyll., Sch. Curc. iv, 288 (*Cvliodes*); *leprosus* Boh., Sch. Curc. viii, 1, 394 (*Cvliodes*).

Var. *tenebrosus*.

7. *A. tarsalis* n. sp.
8. *A. guttatus* n. sp.
9. *A. perplexus* n. sp.
10. *A. mendicus* n. sp.
11. *A. pusillus* n. sp.

AULEUTES gen. nov.

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1. *A. curvipes* n. sp.
2. *A. asper* Lec., Proc. Amer. Philos. Soc. xv, p. 270.
3. *A. tenuipes* Lec., Proc. Amer. Philos. Soc. xv, 270.
4. *A. ater* n. sp.
5. *A. tuberculatus* n. sp.
6. *A. subfasciatus* n. sp.
7. *A. tachygonoides* n. sp.
8. *A. longirostris* n. sp.
9. *A. epilobii* Payk., Fn. Succ. iii, 259; Germ., Fn. Ins. Eur. 18, 13; Gyll., Sch. Cure. iv, 288; *cruralis* Lec. (*Crliodes*), Proc. Amer. Philos. Soc. xv, 270.

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10. *A. nasalis* Lec., Proc. Amer. Philos. Soc. xv, 271.
11. *A. nebulosus* Lec., Proc. Amer. Philos. Soc. xv, 271.

PELENOSOMUS gen. nov.

1. *P. cristatus* n. sp.

ORCHESTOMERUS gen. nov.

1. *O. ulkei* n. sp.
2. *O. wickhami* n. sp.

ACALLODES Lec.

1. *A. ventricosus* Lec., Proc. Amer. Philos. Soc. xv, 272.
2. *A. salcoides* n. sp.

CÆLIODES Sch.

1. *C. apicalis* n. sp.
2. *C. vitiosus* n. sp.

CEUTORHYNCHUS Germ.

‡

1. *C. subpubescens* Lec., Proc. Amer. Philos. Soc. xv, 273.
2. *C. affluentus* n. sp.
3. *C. seriesetosus* n. sp.
4. *C. isolatus* n. sp.
5. *C. rudis* Lec., Proc. Amer. Philos. Soc. xv, 275.
6. *C. sericans* Lec., Proc. Amer. Philos. Soc. xv, 275.

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7. *C. angulatus* Lec., Proc. Amer. Philos. Soc. xv, 277.
8. *C. consanguineus* n. sp.
9. *C. disturbatus* n. sp.
10. *C. obliquus* Lec., Proc. Amer. Philos. Soc. xv, 278.
11. *C. tau* Lec., Proc. Amer. Philos. Soc. xv, 278.
12. *C. ovipennis* n. sp.

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13. *C. sulcipennis* Lec., Proc. Amer. Philos. Soc. xv, 274.
14. *C. decipiens* Lec., Proc. Amer. Philos. Soc. xv, 275.

15. *C. cyanipennis* Germ., Ins. spec. nov. 235; Gyll., Sch. Cure. iv, p. 58; Illig.,
Dej. Cat. 3d ed. 323.
16. *C. æratus* n. sp.
17. *C. bolteri* n. sp.
18. *C. hirticollis* n. sp.
19. *C. armatus* n. sp.
20. *C. pollinosus* n. sp.

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21. *C. hornii* n. sp.  
22. *C. nodipennis* n. sp.  
23. *C. adjunctus* n. sp.

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24. *C. mutabilis* n. sp.
25. *O. ovalis* n. sp.
26. *C. intermedius* n. sp.
27. *C. numulus* n. sp.
28. *C. hamiltoni* n. sp.
29. *C. pusil* Mann., Bull. Mosc. 1852, ii, 355; Lec., Proc. Amer. Philos. Soc. xv,
276.
30. *C. adspersulus* n. sp.
31. *C. pusilus* Lec., Proc. Amer. Philos. Soc. xv, 276.
32. *C. pauxillus* n. sp.
33. *C. convexcicollis* Lec., Proc. Amer. Philos. Soc. xv, 276.
Var. *atomus*.

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34. *C. anthonomoides* n. sp.  
35. *C. squamatus* Lec., Proc. Amer. Philos. Soc. xv, 277.  
36. *C. oregonensis* n. sp.  
37. *C. sculus* n. sp.  
38. *C. persimilis* n. sp.  
39. *C. albopilosulus* n. sp.

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40. *C. semirufus* Lec., Proc. Amer. Philos. Soc. xv, 278.
41. *C. medialis* Lec., Proc. Amer. Philos. Soc. xv, 279.
42. *C. erythropus* n. sp.
43. *C. morosus* n. sp.
44. *C. atriculus* n. sp.
45. *C. septentrionis* Gyll., Sch. Cure. iv, 492; Lec., Proc. Amer. Philos. Soc.
xv, 279.
46. *C. puberulus* Lec., Proc. Amer. Philos. Soc. xv, 279.
47. *C. zimmermanni* Gyll., Sch. Cure. iv, 492; Lec., Proc. Amer. Philos. Soc. xv,
279.

RILEYONYMUS gen. nov.

1. *R. relictus* n. sp.

CÆLOGASTER Sch.

1. *C. zimmermanni* Gyll., Sch. Cure. iv, 580; Lec., Pr. Am. Phil. Soc. xv, 283.
2. *C. lituratus* n. sp.

PERIGASTER gen. nov.

1. *P. cretura* Herbst, Käfer vii, 70, pl. 100, fig. 5 (*Cureulia*); Say, Cure. 20; ed. Lec. i, 285 (*Centorhynchus*); *Falciger 4-spinosus* Say, Jour. Ac. Nat. Sci. Phila. iii, 310; Lec., ii, 173, *Phytobius 4-spinosus* Gyll., Sch. Cure. iii, 463; Lec., Proc. Amer. Philos. Soc. xv, 283.
2. *P. obscurus* Lec., Proc. Amer. Philos. Soc. xv, 283.

PERENTHIS gen. nov.

1. *P. vestitus* n. sp.

PELENOMUS Thomps.

1. *P. cavifrons* Lec., Proc. Amer. Philos. Soc. xv, 282.
2. *P. stidicollis* Fab., Sch. Cure. vii, 346; Lec., Proc. Am. Phil. Soc. xv, 281.
3. *P. gracilipes* n. sp.
4. *P. asperulus* n. sp.
5. *P. squamosus* Lec., Proc. Amer. Philos. Soc. xv, 281.
6. *P. pusillus* n. sp.

MECOPELTUS gen. nov.

1. *M. fuliginosus* n. sp.
2. *M. scandens* n. sp.
3. *M. obscurefasciatus* n. sp.
4. *M. æneosquamosus* n. sp.
5. *M. congenialis* n. sp.
6. *M. scoliasus* n. sp.

RHINONCUS Sch.

1. *R. occidentalis* n. sp.
2. *R. pyrrhopus* Boh., Sch. Cure. viii, 2, 172; Lec., Proc. Am. Phil. Soc. xv, 284.
3. *R. longulus* Lec., Proc. Amer. Philos. Soc. xv, 284.

PHYTOBIUS Sch.

Subgenus *Phytobius* stricte sic dicta.

1. *P. griseomicans* n. sp. (Schwarz MSS.).

Subgenus *Euhrychiopsis*.

2. *P. lecontei* n. sp. (Schwarz MSS.).

EXPLANATION OF PLATE XII.

- Fig. 1. Abdomen of *Craponius inequalis*.
 " 2. Anterior tibia of *Cnemogonus lecontei*.
 " 3. *Acanthoscelis guttatus*.
 " 4. " *pusillus*.
 " 5. " *californicus*, middle tibia of ♂; 5a, posterior tibia of do.
 " 6. " *frontalis*, lateral view of head; 6a, middle tibia of ♂ of do.
 " 7. " *griseus*, posterior tibiæ of ♂.
 " 8. " *iler*, posterior tibia of ♂.
 " 9. " *acephalus*, lateral view of head; 9a, anterior tibiæ and tarsus of do; 9b, posterior tibiæ of do.
 " 10. " *curtus*, posterior tibiæ of ♀.

- Fig. 11. *Acanthoscelis tarsatis*, anterior tarsus of.
 " 12. *Auletes subfasciatus*.
 " 13. " *tachygonoides*.
 " 14. " *leuipetes*, underside of pectus; 14a, do of *A. nebulosus*.
 " 15. Anterior tibiae of *Auletes curripes*; 15a, do of *A. asper*; 15b, do of *A. langirostris*; 15c, do of *A. epilobii*.
 " 16. *Pelenosomus cristatus*.
 " 17. *Orchestomerus ulkei*; 17a, hind leg of do.

EXPLANATION OF PLATE XIII.

- Fig. 18. *Orchestomerus wickhami*; 18a, lateral view of do; 18b, hind leg of do; 18c, anterior femur of do.
 " 19. *Acallodes ventricosus*; 19a, abdomen of do.
 " 20. " *sulcoides*.
 " 21. *Centorhynchus rudis*.
 " 22. " *angulatus*.
 " 23. " *consanguineus*.
 " 24. " *ovipennis*.
 " 25. " *hornii*.
 " 26. " *oralis*; 26a, antenna of do; 26b, anterior tarsus of do.

EXPLANATION OF PLATE XIV.

- Fig. 27. *Centorhynchus siculus*.
 " 28. " *senirufus*.
 " 29. " *medialis*.
 " 30. Antenna of *C. mutabilis*; 30a, antennal club of *C. convexicollis*.
 " 31. Anterior tarsus of *C. oregonensis*; 31a, do of *C. persimilis*; 31b, do of *C. mutabilis*; 31c, do of *convexicollis*.
 " 32. *Rileyonymus relictus*; 32a, view of upper side of head; 32b, anterior tarsus of do.
 " 33. *Catogaster zimmermanni*; 33a, lateral view of head and prothorax of do; 33b, underside of prothorax.
 " 34. *C. lituratus*; 34a, lateral view of head; 34b, underside of prothorax.
 " 35. *Perenthis vestitus*; 35a, lateral view of head of do.
 " 36. *Perigaster obscurus*.
 " 37. Lateral view of head of *Pelenomus cavifrons*; 37a, do of *P. squamosus*; 37b, do of *P. pusillus*.
 " 38. Antennae of *Pelenomus sulcicollis*.
 " 39. Anterior tarsus of *Pelenomus gracillipes*.
 " 40. Tarsus of *Phytobius griseomicans*.